F. J. Hatch

Aerodrome of Democracy:

Canada and the British Commonwealth Air Training Plan 1939-1945

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Cover

The painting, *Looking South on No. 10 R.D.* by Peter Whyte, courtesy of the Canadian War Museum, shows a scene at No. 10 Repair Depot, Calgary, Alta. where aircraft from flying training schools in Alberta and the southern part of Saskatchewan were repaired. Although the unit repaired many different types of aircraft the artist centres on Avro Ansons which most likely belonged to No. 3 Service Flying Training School, also at Calgary, and No. 7 at Fort Macleod. Peter Whyte was born at Banff, Alta. and studied art in Los Angeles and Boston. He is unique among war artists in that he found his theme in the flying training schools based on the Canadian Prairies.

Maps drawn by
William R. Constable
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LE CANADA, AÉRODROME DE LA DÉMOCRATIE:
LE PLAN D'ENTRAÎNEMENT AÉRIEN DU COMMONWEALTH
BRITANNIQUE, 1939-1945

F.J. HATCH

The Aerodrome of Democracy:

Canada and the British Commonwealth Air Training Plan, 1939-1945

Directorate of History
Department of National Defence
Ottawa, Canada
1983

"Once in Washington I was even a ghost writer for President Roosevelt, though he may never have known it. The President wished to send a message of congratulation to Mr. King on the third anniversary of the British Commonwealth Air Training Plan, a project in which Canada now took a great and justifiable pride. I was surprised when a friend on the White House staff, ignoring all rules of diplomatic propriety and without telling the State Department anything, asked me whether I would be kind enough to do a draft of the message for the President. I did. So on 1 January 1943 the Prime Minister of Canada received a very impressive letter lauding Canada as the 'aerodrome of democracy' drafted by me but signed by the President of the United States!"

L.B. Pearson
Mike, The Memoirs of the
Right Honorable Lester B. Pearson,
University of Toronto Press I, 1972, 208.

Acknowledgements

The theme of this narrative was first developed to meet the requirements of a doctoral dissertation in military history. Both in the original work and the present study, I am greatly indebted to colleagues in the Directorate of History, Department of National Defence, for their guidance, support and criticisms. Mr. Brereton Greenhous, and Dr. Norman Hillmer have been particularly helpful. I am also grateful to Miss M.H. Sabatier for having prepared the French translation, to Dr. J.J.B. Pariseau for having edited the French version and to Mr. W.R. Constable who drew the maps. It must be added that men and women involved in the BCATP as students, instructors or in a ground support role made a most valuable contribution by generously granting interviews, providing photographs and in some cases through published accounts of their experience.

F.J.H.

Note: In the writing of this volume the author has been given full access to relevant official documents in possession of the Department of National Defence; but the inferences drawn and the opinions expressed are those of the author himself, and the Department is in no way responsible for his reading or presentation of the facts as stated.

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List of Abbreviations

AFU	Advanced Flying Unit
AP	Air Publication
ANS	Air Navigation School
AOS	Air Observer School
BCATP	British Commonwealth Air Training Plan
BFTS	British Flying Training School
BGS	Bombing and Gunnery School
CAS	Chief of the Air Staff
CFS	Central Flying School
DCER	Documents on Canadian External Relations
DFC	Distinguished Flying Cross
DHist	Directorate of History, Department of National Defence
DOT	Department of Transport
DSC	Distinguished Service Cross
DSO	Distinguished Service Order
EFTS	Elementary Flying Training School
HQ	Headquarters
ITS	Initial Training School
OTU	Operational Training School
PAC	Public Archives of Canada
PRO	Public Records Office
RAF	Royal Air Force
RAAF	Royal Australian Air Force
RCAF	Royal Canadian Air Force

RDF	Radio Direction Finding
RNAS	Royal Naval Air Service
RNZAF	Royal New Zealand Air Force
RS	Reconnaissance School
SFTS	Service Flying Training School
USAAC	United States Army Air Corps (before June 1942)
USAF	United States Army Air Forces (after June 1942)
VHF	Very High Frequency
WETP	War Emergency Training Plan
WS	Wireless School

Ranks in the RCAF

Boy	Boy
Aircraftman, 2nd Class	AC2
Aircraftman, 1st Class	AC1
Leading Aircraftman	LAC
Corporal	Cpl
Sergeant	Sgt
Flight Sergeant	Flt Sgt
Warrant Officer, Class II	WO II
Warrant Officer, Class I	WO I
Pilot Officer	P/O
Flying Officer	F/O
Flight Lieutenant	F/L
Squadron Leader	S/L
Wing Commander	W/C
Group Captain	G/C
Air Commodore	A/C
Air Vice-Marshal	A/V/M
Air Marshal	A/M
Air Chief Marshal	A/C/M

Introduction

This book is one in a series of occasional publications in Canadian military history, and the first in the Directorate of History's Monograph Series. It describes the British Commonwealth Air Training Plan (BCATP), a scheme that produced more than 130,000 trained aircrew for the Allies during the Second World War. The training took place in Canada, and the Royal Canadian Air Force was the controlling authority. It is a subject of considerable importance because, in aerial warfare, an effective training programme is the key to success. All other requirements, such as equipment, intelligence, tactical innovation and strategic advantage, are of limited value without adequately trained personnel.

The official history of the RCAF will also address itself to the subject, but not in comparable detail. It is necessary in the official history to compress and adapt detail, to place it in context with other aspects of air force activities, politics, and strategic developments. Dr. Fred Hatch has devoted many years to his examination of the British Commonwealth Air Training Plan, and he has accordingly been asked to prepare an account that will make the record of a major air training programme during the Second World War available to students of military aviation. They will find it an important source.

The first volume of the official history, *Canadian Airmen and the First* World War, by S.F. Wise, describes how Canada became a major centre of air training for the Royal Flying Corps and Royal Air Force in 1917 and 1918. That experience did not, however, lead inevitably to the scheme developed between 1939 and 1945. There were large differences. In 1917 the "Imperial Royal Flying Corps", as its representatives styled it in Canada, established itself in the country by an administrative agreement with the Canadian government through the good offices of the Chief of General Staff, Major General Willoughby Gwatkin. Without reference to Canadian political authorities the senior British RFC officer, Colonel C.G. Hoare, negotiated with the United States Army Aviation Section to share training facilities in Texas and Ontario. "RFC Canada", or as it became on 1 April 1978 "RAF Canada", brought thousands of Canadians and Americans into the air force and trained them as aircrew. These events sparked the rapid expansion of an embryo aircraft industry that, by November 1918, had produced 2900 training aircraft, about thirty F5L Flying Boats, and even some aero-engines. Closely tied to the Mother Country as it was, between 1914 and 1918, Canada made a significant advance into the air age under the stimulus of war.

Between the wars Canada developed closer ties with American industry and more independence from Britain. The transatlantic link remained strong, but circumstances changed. The principal military advantage of RFC/RAF Canada in the First World War had been its recruiting potential. Training on a similar scale had taken place both in Great Britain and in Egypt. British airmen did not cross the Atlantic to take courses, although many left the war zone to become instructors in Canada. As war again approached in the late 1930s there was foreseen a requirement, not only to provide a source of Canadian airmen but also, and primarily, to accommodate British trainees. At that time the RAF again began looking to the senior Dominion for air training facilities. When wartime expansion occurred the British schools were expected to overflow. The Canadian reaction, however, was quite different than it had been in 1917. As Fred Hatch points out, the Prime Minister, accepting the counsel of his senior diplomatic advisors, strenuously resisted the establishment of British training schools on Canadian territory. The measure seemed to imply an unacceptable incursion upon national sovereignty.

When at last military considerations prevailed in late 1939, the new political relationship between Britain and Canada exerted a strong influence on the form of a training agreement drawn up between the two countries. So did the changing conditions of aerial warfare. Air force officers in Ottawa, no less than in Britain, perceived the advantages of a large scale training scheme in Canada. It was evident that British skies would be crowded and dangerous, much more so than twenty-five years before. With rapid wartime expansion British training facilities would soon be strained beyond desirable limits. RAF planners had also cast their covetous glances toward Southern Rhodesia, South Africa and Australia. Each area had its advantages. None, as Dr. Hatch explains, matched the proximity of Canadian training schools to North Atlantic trade routes. This was a major factor leading to the preference for Canada.

In some respects, also, the BCATP was the most acceptable form of assistance Canada could provide in 1939. It would demand a major effort at home, stimulate the economy, and exert a marked influence on operations overseas. The terms of reference, however, had to ensure that Canada retain full national control, both of the scheme itself and of its Canadian graduates. When the Canadian and British governments drew up the BCATP agreement, it was at the cost of hard bargaining with a great deal of mutual recrimination. The implementation of the programme followed a rocky path until, in 1943, both governments agreed on Canadianisation of RCAF forces overseas.

At the same time, the BCATP sometimes worked at cross purposes with other RCAF undertakings in Canada. It was paradoxical that the Home War Establishment, responsible for air defence of Canada, could only call upon a small proportion of Canadian BCATP graduates. The majority were by terms of the agreement required to proceed to RCAF or RAF squadrons overseas. Yet the Canadian cabinet, largely preoccupied with domestic issues and denied the voice in allied strategic decisions that the Prime Minister actively sought, placed much emphasis upon home defence. To some extent this was a reaction to the increased submarine threat in the western Atlantic, but it was also in response to political pressures. Resources for air defence may have been determined by sometimes unrealistic assessments, but one should keep in mind the sudden transformation that policy makers had to deal with. From being a small nation with virtually no armed forces Canada was becoming a fairly significant military power. As the military establishment mushroomed, men with no previous experience in the administering of large armed forces did not find it easy to grasp the requirements of modern war.

It is in this general context, which is the concern of Volume II in the RCAF official history series, that the BCATP operated. The mechanics of the scheme were more a function of developments in the air war overseas, which will be examined in Volume III. Dr. Hatch has made some reference to this relationship, and it may help to summarize the major turning points here.

Until the spring of 1941 Germany held the initiative in aerial operations. Britain's need for aircrew was fed by losses in France and the Battle of Britain in 1940, by the need to defend against the Blitz and to reinforce squadrons in Malta and the Middle East. The official historians of the RAF have aptly named this phase of the air war *The Fight at Odds*. In July 1941, however, Britain radically increased its strategic bombing effort and began other offensive aerial operations against the Axis powers. Casualties increased partly because the offensive is inherently more costly than other kinds of warfare, partly because the RAF deliberately set out to test and provoke the German defences. Additional pressures arose out of the Japanese entry into the war in December, 1941. In 1942 Bomber Command began to run short of aircrew, especially because of new requirements in the Middle East. The decision was made to allocate only one pilot to each bomber — something which made longer training courses possible — and to alter the composition of bomber crews, as described in Chapters VI and VIII. All this had its effect on the BCATP, especially the great emphasis placed on bombing operations. The final stage of the war, the invasion of Europe and subsequent defeat in Japan, resulted in a steady reduction of wastage among aircrew, and as described in Chapter IX a surplus of BCATP graduates.

There is much in the story of the BCATP that will interest succeeding generations of readers. Canada still offers ideal circumstances for the large scale training of aviators. The success of the scheme is vividly demonstrated by comparing the hours flown for each fatal training accident. In 1917 the RFC Canada figure had been 200 hours. By October 1918 it had improved to 5800 hours. In 1940-41 the BCATP figure was 11, 156 hours and by the end of the Second World War this had improved to 22,388 hours. Casualty figures among graduates, on the other hand, remained uniformly high. Group portraits of graduating classes, fine young men who smile happily at the camera, reveal time and again that only a minority actually survived the air war.

Whatever the reason for that grim statistic, the importance of being able to train large numbers of highly qualified men, and to replace them in war, remains paramount. It makes an understanding of training vital, to the historian and the military professional alike.

W.A.B. Douglas, Director
Directorate of History
Department of National Defence

1

An Undertaking of Great Magnitude

At midnight on 16 December 1939, about three and a half months after the outbreak of the Second World War, a small group of men gathered in the office of Prime Minister Mackenzie King for the signing of an "Agreement Relating to the Training of Pilots and Aircraft Crews in Canada and Their Subsequent Service." There was a brief discussion as to whether the document should be dated the 16th or the 17th. It was to have been signed on the 16th but Mackenzie King pointed out that as it was now actually the 17th he preferred that date to be used and the others agreed. The 17th also happened to be the Prime Minister's birthday and for him this would indicate an auspicious beginning to the British Commonwealth Air Training Plan, for anniversaries, like certain numbers, and the hands of the clock when they were in a straight line, held special messages for King.[1] After a pause for a round of birthday greetings the Agreement was signed, by Lord Riverdale for the United Kingdom and by King for Canada.[2] The delegates from Australia and New Zealand, also party to the negotiations, had left for home before all the details were settled and their signatures were added later.

That evening, in a radio broadcast to the Canadian people, King described the BCATP as a co-operative undertaking of "great magnitude."

> It will establish Canada as one of the greatest air training centres of the world. Its development will result in a rapid increase in the number of air training schools in the country, and will achieve a steadily increasing output of highly trained pilots, observers and air gunners.... The aim in short, is to

---

[*] Besides the Prime Minister those present included Lord Riverdale, chief British negotiater, O.D. Skelton, Canadian Under Secretary of State for External Affairs, A.D.P. Heeney, Principal Secretary to the Prime Minister, W. Turnbull, Secretary to the Prime Minister, J.B. Abraham, of the British Air Ministry, and Air Chief Marshal Sir Robert Brooke-Popham, RAF.

> achieve, by co-operative effort, air forces whose co-ordinated strength will be overwhelming.[3]

There were undoubtedly political overtones in these words but the importance King attached to the Air Training Agreement was not misplaced. It was the corner-stone of the Commonwealth Air Training Plan which, in the fullness of time was to contribute more than 130,000 aircrew to the air forces of the allied nations.

Although the BCATP was born of the Second World War its origins lay deeply imbedded in the tangled history of Commonwealth air relations, particularly the relations between Canada and the United Kingdom, and may be traced back to the conflict of 1914 - 1918. In that epic struggle Canada did not have an air force of its own and those Canadians who preferred to fly into battle rather than wallow through the mud of Flanders, had the option of joining one of the two British air arms — the Royal Naval Air Service or the Royal Flying Corps — which in April 1918 were amalgamated as the Royal Air Force. Altogether some 22,000 Canadians served in the British flying services.[4] Thus the RAF, which at the end of the war was the most powerful air force in the world, depended heavily on Canada for pilots and observers.

After the First World War the way was left open for Canadians to join the RAF. The British reserved two permanent commissions annually for Canadian university graduates or graduates of the Royal Military College, while Canadians with high school standing were eligible to apply for short service commissions of five or six years' duration in competition with candidates from the United Kingdom.[5] In the peaceful and prosperous climate of the 1920s, when there was a shortage of pilots in Canada, these opportunities to serve in the RAF attracted little attention. But in the next decade, as the British became acutely aware that their main weakness relative to Germany was in the realm of air power, they inaugurated an active recruiting campaign which caught the imagination of Canadian youth. The drive for Dominion aircrew did not begin in a serious way until 1934, the year in which the RAF embarked on its first post-war plan of expansion. However, there is some evidence that the prolonged economic depression which severely restricted the growth of Canadian civil and military aviation led young aviators to look for a flying career on the other side of the Atlantic before that.

In 1931, for example, the RCAF graduated twenty-five pilots from its flying school at Camp Borden but, owing to its restricted budget, granted appointments to only one — Pilot Officer J.L. Plant of Victoria. Like most of the pilots accepted by the RCAF before the war, Plant held a degree in engineering and could thus serve in a specialist non-flying capacity in addition to his flying duties. The air force had nothing to offer the others except a place on the reserve list. Even Provisional Pilot Officer P.Y. Davoud, a graduate of the Royal Military College at Kingston, and winner of the 1931 Sword of Honour at Camp Borden as top ranking student pilot, who was sponsored by no less a personage than Major-General A.G.L. McNaughton, Chief of the General Staff, found to his disappointment that "there was absolutely no chance of getting into the RCAF." His interest immediately turned to the RAF and, after a considerable amount of correspondence had passed between Air Force Headquarters in Ottawa and the Air Ministry in London, Davoud and two companions were offered permanent commissions and "headed for England as fast as we could."[6]

In the fiscal year 1934-35 two Canadians were taken into the RAF with permanent commissions and six with short-service commissions.[7] The next year, "In consequence of the extensive publicity given to the expansion of the Royal Air Force in England," Air Force Headquarters in Ottawa reported "a decidedly increased number of applications for entry into the RAF." No less than thirty-six candidates were successful in obtaining short-service commissions while one was nominated for a permanent commission.[8] As a rule, those accepted in the latter category were university or RMC graduates who had received the regular course of pilot training at Camp Borden but, like Davoud, were not offered appointments in the RCAF.

Up to this time the entry of Canadians into the RAF was more or less on an *ad hoc* basis. Individuals made their own enquiries either to their local military district or to Air Force Headquarters which put them in touch with the RAF. Before leaving for the United Kingdom, at their own expense, they were interviewed by an officer at the nearest military district headquarters. Beyond this the Canadian government accepted no responsibilities and if they were rejected by the Air Ministry, as fortunately few of them were, they were left to their own devices and their own resources. In

1935, eager to encourage more recruits, the Air Ministry outlined a scheme "which would obviate the risk of a candidate being put to unnecessary expense through rejection in this country. With this end in view they are prepared for the time being to accept for appointment to short service commissions a maximum of twenty-five candidates a year who would be finally selected in Canada."[9] Candidates were to be medically examined before sailing and would thus be reasonably assured of acceptance on arrival in the United Kingdom. In 1936 the Air Ministry advised that it was prepared to reimburse these candidates for their travelling expenses.[10]

With these added incentives the movement of Canadians into the RAF took on greater dimensions. In 1936-37 in addition to the two permanent commissions, thirty-seven applications for short-service commissions were forwarded to the Air Ministry by the RCAF. Of these "17 were accepted, three were found medically unfit, one withdrew and 16 are still pending."[11] Since individuals recommended by Air Force Headquarters were seldom rejected it may reasonably be assumed that this group of sixteen was also accepted, making a total of thirty-three. In addition, the report of the Senior Air Officer mentioned that "Information was also received from the various (Military) Districts that 40 applicants made direct application."[12] What became of this group is not clear. Apparently it consisted of eager young Canadians who were too impatient to wait for their applications to be properly processed and made their way independently to the United Kingdom, most of them no doubt working their passage on cattle-boats. Since the RAF, for various reasons, was seldom unable to induct them immediately, they often faced a prolonged period of waiting for which they were not financially prepared. Few, however, were turned down.[13]

At this time the annual quota of Canadians to be enrolled under the direct entry system was twenty-five. This number, though proposed by the British in November 1935, was not officially approved by Ottawa until 1937 and then only after some urging from the United Kingdom.[14] But it had already been exceeded in 1935-36 and again in 1936-37. Somewhat embarrassed by the growing number of unsolicited candidates, the British, in April 1937 — just a month after the Canadians had agreed to the quota of twenty-five — asked that it be raised to one hundred and twenty.[15] The Canadian government pondered over this request for almost a year. Finally, in March 1938, after several reminders from the British, it gave approval with the caution that "this cannot be regarded as a commitment."[16] As a result, by the end of March 1939 another one hundred and eighteen Canadians were selected for short-service commissions and processed through official channels. The new quota remained in effect until September 1939 but in the last few months of peace the interest of air-minded Canadians was beginning to focus on opportunities opened up by the expansion of the RCAF then getting underway.

Precise figures are not available, but the number of Canadian aircrew candidates who joined the RAF between the two world wars was in excess of four hundred.* The annual reports of the Department of National Defence show that from the fiscal year 1932-1933, the first year for which records are available, to 31 March 1939, two hundred and ninety Canadians were enrolled in the RAF. In addition there were three who received permanent commissions in 1931 and an unknown number, probably about fifty in all, who joined the RAF between 31 March 1939, the last date for which statistics are given, and the outbreak of war. Allowance must also be made for the possibility that some Canadians, whose numbers could not have been very great, applied directly to the Air Ministry, either by mail or in person, and were accepted without the RCAF being informed. Another source, a list prepared by the Air Ministry, indicates that 446 Canadians, including seven veterans of the First World War, were serving in the RAF as aircrew at the end of 1939. Permanent commissions had been granted to 295 and short-service commissions to 151.[17]

With very few exceptions all these Canadians were trained as pilots. As a result there were considerably more Canadian pilots in the RAF than in the RCAF, which listed only 235 pilots on strength in August 1939.[18] Of course, had the Air Ministry wanted to, it could easily have obtained all its pilots from applicants in the United Kingdom. But it was not so concerned about its immediate needs as its future manpower requirements and was consciously rebuilding the RAF in the same manpower configuration that it had in 1918 when such a large proportion of aircrew were drawn from outside the United Kingdom.[19] By extending their recruiting base to Canada and the other Dominions the British were able to accomplish three major objectives: they maintained an extremely high standard of aircrew selection, they eased the strain on their own manpower resources and more importantly they involved the other Commonwealth partners in the expansion of the RAF.

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* A list of non-aircrew shows 441 Canadians serving in the RAF as ground tradesmen. DHist 181.005(D270).

The recruiting programme of the RAF in the Dominions was accompanied by a series of proposals for air training schemes. As a result of a suggestion made at the Imperial Conference of 1923, Australian applicants for short-service commissions in the RAF were selected and trained by the Royal Australian Air Force and arrived in the United kingdom as fully-trained pilots. About fifteen a year were going over in the early 1930s and the Air Ministry was urging that the number be increased.[20] The other Dominions were also asked to undertake similar schemes and in November 1935 the proposal was tentatively accepted by Canada. Owing to the depression (which caused a delay in the development of new training facilities at Trenton, Ont.) and an increase in Canada's own air training requirements, coupled with the cautious approach taken to Air Ministry proposals by Mackenzie King and his advisers, final approval was not forthcoming until 1937.[21] Under the new "Trained in Canada Scheme" fifteen candidates for the RAF were selected and trained by the RCAF in conjunction with its own training programme which closely followed the RAF syllabus. The first group of fifteen began training at Trenton in January 1938 with thirteen successfully completing the course in October.[22] A second group, which started in January 1939, qualified in September but were retained in Canada[23] for reasons which will become apparent in the course of this study.

The Trained in Canada Scheme was but a drop in the bucket of RAF requirements. In 1935, the same year in which the scheme was conceived, the British government, now faced with a resurgent German air force, approved the construction of seven new training schools. More would soon be needed and the Air Ministry felt that some of them should be established outside the United Kingdom, where land was at a premium and the weather unpredictable. Passing over suggestions for new schools to be set up in Egypt and Cyprus, Air Ministry officials settled on Canada as the most suitable location.

One of the first to draw the attention of the Air Ministry to the advantage of establishing a flying training school in North America was Group Captain Robert Leckie, DSO, DSC, DFC, a Canadian member of the RAF who was destined to play an important part in the BCATP. He was one of about eight hundred Canadians who had joined the Royal Naval Air Service in the First World War and one of its most distinguished flying-boat pilots. After the war he chose to stay with the RAF but was sent to Canada to assist with the organization of Canadian aviation then very much in its infancy. In 1922 he returned to England to continue his career in the RAF and from 1933 to 1936 held the appointment of Superintendent of RAF Reserves, which formed part of the Training Branch commanded by Group Captain Arthur Tedder (later Marshal of the RAF Lord Tedder).

For the benefit of his superiors, who should have remembered the training schools established there in 1917 by RFC Canada,[*] Leckie drafted a memorandum spelling out the strategic advantages of Canada as a training centre for the RAF. He particularly emphasized its relative closeness to the United Kingdom, its proximity to the industrial resources of the United States and the possibility of attracting more Canadian applicants to the RAF.[24] His memorandum apparently triggered the appropriate responses, for in August 1936 Tedder and Lord Swinton, the British Secretary of State for Air from 1935 to 1938, approached Ian Mackenzie, the Canadian Minister of National Defence, on the question of obtaining air training space in Canada. Mackenzie promised to sound out the views of his Cabinet colleagues on his return to Ottawa.[25] When he did so it brought the negative response that "it would be inadvisable to have Canadian territory used by the British Government for training school purposes for British airmen."[26]

The question lay dormant for almost another two years, apparently because Mackenzie King, feeling that it was a politically divisive issue, did not want it discussed. Nevertheless, in May 1938 the government of the United Kingdom sent an air mission to Canada headed by J.G. Weir, a British industrialist, to make a survey of the Dominion's aircraft manufacturing potential and, at the last moment, instructed Weir to put forward the air training question as well. Sir Francis Floud, the British High Commissioner in Ottawa was also brought into the picture. In conversations with Weir and Floud the Prime Minister showed himself firmly opposed to the establishment of British training schools in Canada. In his own account of this conversation, as related to O.D. Skelton, King said that he told the two visitors that "we would agree to cooperate to the exent of all the (training) space they might wish...." Although Canadian space and training facilities could be made available, RAF control was unacceptable.[27] The substance of King's conversations with Weir and Floud was leaked to the press and in due course criticisms of the government's attitude were raised in the Senate by Arthur Meighen and in the House of Commons by R.B. Bennett, Leader of the Opposition. Hard pressed by Bennett for a statement of government policy, King replied:

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[*] A full account of this can be found in Chapter 4 of S.F. Wise, *Canadian Airmen and the First World War* (Toronto: University of Toronto Press, 1980).

> we... are prepared to have our own establishments here and to give in those establishments facilities to British pilots to come and train here. But they must come and train in establishments which are under the control of the government of Canada and for which the Minister of National Defence will be able to answer in this parliament with respect to everything concerning them.[28]

This statement more or less defused the issue and became the basis of a new approach to the air training question. On 5 July, just four days later, an offer along the line proposed by King was conveyed to the British government. Included was an invitation to send a representative to Canada to explore the possibilities of working out a satisfactory scheme.[29] Nothing was said about numbers, but before the offer was made Air Commodore G.M. Croil, the Senior Air Officer and about to become the first Chief of the Air Staff,* had been asked by the Deputy Minister of National Defence, Major-General L.R. LaFlèche, to outline a plan that could be used as a basis for discussion with the British. In his report Croil pointed out that existing training facilities at Camp Borden and Trenton were barely adequate to meet RCAF requirements. By increasing the number of training aircraft, instructors, and ground tradesmen he estimated that it would be possible to train a limited number of pilots for Great Britain "not in excess of 50 per year." If a larger number were to be trained (he took 300 as a hypothetical figure) additional schools would have to be built to accommodate the British.[10]

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* Croil was promoted to air vice-marshal on 4 August 1938 and was named Chief of the Air Staff on 19 November. Previously the chief executive officer of the RCAF was known as the Senior Air Officer and was subordinate to the Chief of the General Staff. As CAS Croil reported to the Minister of National Defence. In May 1940 he was succeeded by A/V/M Breadner.

King's pronouncement in the House of Commons and his subsequent offer evoked expressions of gratitude in the United Kingdom. Sir Kingsley Wood, the new Secretary of State for Air, reported on 7 July that a reply had already been sent "expressing warm appreciation for the offer" and that arrangements were being made "for an officer to be sent immediately to Canada to explore... the possibilities of working out such a scheme for training facilities in Canada."[11]

British expectations had been raised to a new height but unfortunately King's offer was misinterpreted at Whitehall. This became quite clear after the arrival of Group Captain J.M. Robb, commandant of the Central Flying School of the RAF, whom the British government appointed to work out the details for a new air training scheme. Robb reached Ottawa in late July, under the false impression, as were the British generally, that King's offer to train British pilots extended to training Canadian pilots for the RAF. What is more incredible, however, is that Croil, the head of the RCAF, seemed unaware that the main condition of the Canadian proposal was that the pilot trainees must be of British origin, not Canadian. If he was aware of the fact, he certainly failed to make it clear to Robb. Working together with Wing Commander G.R. Howsam, Director of Training, the two officers drew up a plan, subsequently known as Robb's plan, for training three hundred Canadian pilots annually for the RAF. This figure, the same as the one used by Croil in his report to the Deputy Minister on 5 July, was to include the fifteen pilots sent to the RAF under the Trained in Canada Scheme plus the one hundred and twenty direct entries and as many more candidates as could be recruited in Canada. If the total fell short of three hundred the balance was to be made up by recruits from the United Kingdom.[32] Three new air training schools, in addition to those at Camp Borden and Trenton would be required to maintain the desired pilot output.

Robb's plan was logical enough. It made sense to train Canadian pilots for the RAF in Canada, rather than train them in the United Kingdom while British trainees were brought to Canada. But the political implications were not acceptable to Mackenzie King. Canadian sovereignty was involved. On 6 September he asked the British to reconsider the proposal from this point of view and "upon receiving the information I shall communicate it to the Minister of National Defence, in order that he may present the whole situation to Council (Cabinet) as expeditiously as possible."[33] Although letters of acknowledgement passed between the two governments the British did not submit a new proposal until 9 December. This was really a scaled-down version of Robb's plan. Instead of three hundred pilots a year Whitehall was asking for one hundred and thirty-five to be trained in a new plan which would encompass the Trained in Canada Scheme and the direct entry scheme. Nothing was said about sending British pilot trainees to Canada.[34]

In his reply King emphasized two points that should have been clarified much earlier. Although he had never made the slightest suggestion that any other than British pilots were to be included, the British still seemed confused on this all-important condition. This time he made it unmistakably clear, mentioning it no less than three times in the last two paragraphs of his letter. He also explained that the size of the proposed scheme was an obstacle to a settlement, for it would interfere with Canada's own defence requirements, involve the government in recruiting and training Canadians for the RAF in far greater numbers than were being taken into the RCAF, and would virtually destroy the autonomy of that service. As a result air co-operation in the event of war would be less effective than it otherwise might be.[35]

This brought the two parties back to square one. King's problem was that while he wanted to help the British he did not want to go so far as to make it appear that he was getting the country involved in a military commitment which would endanger Canadian unity. If he was to stand by his statement that British pilots were welcome to come to Canada and train "in our own establishments," then the most the British could hope for was to have fifty of their own recruits trained in Canada, that being the maximum number which Croil felt could be accommodated. The

British had no choice but to accept this figure and a new round of discussions got under way in January 1939.

After about two months of fairly intensive negotiating an agreement was worked out whereby fifty British pilots would be trained in conjunction with a plan designed to train seventy-five for the RCAF.[36] In implementing this programme the RCAF made some significant changes in its training organization. Individual pilot training, which previously had been one continuous course lasting about ten months, was now divided into three stages of approximately sixteen weeks each and based on the revised standard syllabus of the RAF (AP 1388).[37] The most interesting innovation resulted from the decision to contract elementary training out to civilian flying clubs, a feature which was to be continued under the BCATP. Early in 1939 eight clubs, located at Vancouver, Calgary, Regina, Winnipeg, Hamilton, Toronto, Montreal, and Halifax, were selected for this role.*

In April and May 1939 a special course was run at Camp Borden to qualify the club instructors in air force procedures. Then, in June, thirty-three Canadian student flyers distributed among the eight clubs began the elementary phase of pilot training. Three were withdrawn from this course and the other thirty went to Camp Borden at the end of August, where three more were weeded out. On 30 October, in the first wings parade of the war, the remainder received their pilot's flying badges.[38]

The fifty British pupils, who were to take their elementary training in the United Kingdom and then transfer to Canada for intermediate and advanced levels, never arrived. With war imminent the Air Ministry decided to keep them at home to complete their training with the RAF. Thus this initial training agreement was never fully implemented. Yet, if it focussed attention on the inadequacy of the Canadian air training organization, it also opened the way for improvement and expansion. What is more significant is that the negotiations which had dragged on from July 1938 to April 1939 brought the RAF and the RCAF closer together on training issues than ever before. Although little had been accomplished from a practical point of view, the problems relating to pilot training had been probed in depth and the stage was set for continuing these discussions on a much larger scale. A common syllabus had been established, types of training aircraft had been discussed and the difficulties of obtaining them better understood, and the civilian flying clubs had been brought into the programme. The Canadian government was more fully aware of the importance the British attached to air training in their rearmament race with the Germans, while the United Kingdom, thanks to King's persistence, understood beyond all doubt that any training in Canada for the RAF would be carried out under the command of the RCAF.

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* There were twenty-two government-subsidized flying clubs in Canada at this time. They had been formed in 1928 and 1929 to create public interest in both civil and military aviation. To this end they gave flying lessons and organized ground displays and aerial exhibitions including the spectacular Trans-Canada Air Pageant of 1931. Among other contributions the clubs, well supported by local communities, developed some of the country's first municipal airfields. With difficulty they survived the Great Depression. While jealously guarding their own independence and civilian status they gave valuable support to the RCAF. Shortly after Canada's declaration of war all twenty-two clubs were training pilots for the RCAF. The British influence can be seen here. Impressed with the vitality of the Canadian flying club movement RAF officers, in the years immediately before the war had encouraged the RCAF to use it for all its elementary training. Interview with A/V/M Howsam, August 1978, Howsam biographical file, DHist.

When war came and Canada aligned herself squarely on the British side, the United Kingdom made an urgent appeal for a substantial increase in the air training establishments of the RCAF. The British "anticipated real difficulty in meeting personnel requirements if, as seems likely, intensive air operations develop in Western Europe," and asked Canada to concentrate on the training of aircrew, a goal of two thousand pilots a year and "as many observers and air gunners as possible" being proposed.[39]

The Air Ministry, looking ahead to its aircrew requirements in the second and third year of war, was soon working on fresh proposals and counting on the Dominions "to help us on a very large scale." Canada, for example, was soon to be asked not for two thousand pilots a year but "approximately four times this number." On 10 September, at a meeting at the Air Ministry, these new plans were revealed to Wing Commander H. V. Heakes, the Canadian Air Liaison Officer in London, and Group Captain A.E. Godfrey, a member of the RCAF who had just completed a course at the Imperial Defence College in London.* The discussion was at a practical level touching on such problems as winter flying in Canada, which Godfrey said would not be a limiting factor in training, the provision of instructors and aircraft, the enlistment of Americans and the availability of airfields. No far reaching decisions were taken but Air Vice-Marshal C.F.A. Portal** stressed that it was important that "all Canadian resources should at first be concentrated on training" with thoughts of an expeditionary air force being delayed for the time being. It was also desirable that a strong British air mission should be sent to Canada to persuade the Canadians of the necessity of air training on a greatly enlarged scale. In answer to a question from Godfrey it was confirmed that the organization would be under the control of the RCAF.[40]

The plans of the Air Ministry were widened in scope through the intervention of Vincent Massey, the Canadian High Commissioner to the United Kingdom, and his Australian counterpart, Stanley M. Bruce both of whom were deeply disturbed by British weakness in the air. In his *Memoirs* Massey relates that on 13 September he and Bruce, together with Heakes and Godfrey and two Australian officers "sat in my room & discussed air matters — the disparity in force (between ourselves and Germany) & other gloomy features." Thus informed they went to "a short meeting at the Dominions Office" and later, presumably the same day, "to a full dress meeting at the Treasury... Bruce and I with Simon, Eden, Halifax, Chatfield and Hankey...." At this meeting, where military matters were discussed, the High Commissioners expressed apprehension about "the air position."[41]

Owing to the lack of documentation, the events of the next nine days, during which the basic principles of what was to become the

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* Godfrey had also been present at the Air Ministry on 2 September 1939, when an expansion of Canadian air training capacity was being discussed. "Memorandum on the possibility of increasing training capacity in Canada for R.A.F.," 2 September 1939, PRO, Air 2/3206. Godfrey left for Canada about 15 September and so would have been able to give Canadian authorities a full report on this new proposal.

** In October 1940 Portal, then Sir Charles Portal, was promoted Air Chief Marshal and appointed Chief of the Air Staff, RAF, in succession to A/C/M Sir Cyril Newall.

BCATP were worked out, apparently by Massey and Bruce, and presented to the Air Ministry, cannot be chronicled in detail. A few points, however, do stand out, some more clearly than others. In his *Memoirs* Massey claimed that after the meeting at the Treasury on 13 September "it occurred to me that Canada might be able to make a decisive contribution ... by training Commonwealth airmen. I consulted my Australian colleague who enthusiastically agreed."[42] Some very earnest conversations must have followed, for on 15 September Massey, Bruce, and W.J. Jordan, the High Commissioner for New Zealand were closeted for one and a half hours with Air Chief Marshal Sir Cyril Newall, Chief of Staff of the RAF, discussing "secret information regarding the RAF."[43]

The next day Massey and Bruce again saw Eden and suggested that "consideration be given to a scheme whereby Canadian, Australian and New Zealand airmen should be trained in Canada ... and ... sent to the front as distinctive Canadian, Australian and New Zealand air forces."[44] Eden promised to "look into this proposal" and apparently did arrange for another meeting with Air Ministry officials.[45] On 22 September, before this meeting took place, Bruce saw Harold Balfour, the Under Secretary of State for Air, and presented a four point programme calling for the pooling of the manpower resources of the three Dominions, elementary pilot training to be given in each country, advanced training to be given in Canada from whence the trained pilots would be sent to the United Kingdom to join Canadian, Australian, or New Zealand squadrons. According to Bruce, "Balfour sparked in every cylinder." Why Massey was not at this meeting is not clear, but his absence has led Bruce's biographer, and Balfour himself, to give Bruce the full credit for originating the BCATP concept.[46] However, the importance of Massey's co-initiative and primary input into a proposal which revolved around active Canadian participation can hardly be over-emphasized.

There was still another conference on the 25th at the Dominions Office[47] and on the following day telegrams outlining the scheme were sent to the Prime Ministers of Canada, Australia, and New Zealand. The message from Chamberlain to Mackenzie King began:

> I am sure that you will agree that the scheme outlined in the following message is of first importance. For this reason, and because it invites cooperation

> with Canada to a special degree. I want to make a special personal appeal to you about it. I feel that so far-reaching a project will strike your imagination particularly as it concerns an all important field of war activity in which Canada has already made so striking and gallant an individual contribution. May I therefore ask that the matter should receive very urgent attention.

The body of the message emphasized that an overwhelming force was needed "to counter German air strength and, in combination with other military measures and economic pressure to bring ultimate victory." The need for Commonwealth aircrew was estimated at not less than 50,000 annually. Four-ninths of these could be raised and trained in the United Kingdom; the remainder were to be recruited in various parts of the Commonwealth with Canada as the principal training ground. The telegram concluded with another dramatic flourish aimed at catching King's favourable attention:

> We hope you will agree as to the immense influence which the development and realization of such a project may have upon the whole course of the war. It might even prove decisive. We trust therefore, that this cooperative method of approach to the problem will appeal to your Government. The knowledge that a vast potential was being built up in the Dominions where no German air activity could interfere with expansion might well have a psychological effect on the Germans equal to that produced by the intervention of the United States in the last war....[48]

King, who received the message just after dinner in his library at Laurier House, was impressed with the magnitude of the proposal and the importance which Chamberlain attached to it. He observed to himself that "with concentration of Canadian energies on air training and air power there would be less risk of agitation for conscription" and concluded that "the most effective military contribution Canada could make was through a great co-operative project to train pilots and aircrew for the Commonwealth air forces."[49] On 28 September, after placing the proposal before Cabinet, King wired Canada's acceptance in principle, agreeing that further discussions should be held in Ottawa.

Although now favourably disposed towards the air training plan, King moved with characteristic caution. He saw, clearly enough, that the British were expecting to enrol large numbers of Canadians in the RAF and might swallow Canada's air effort. Although that had happened in the First World War it could not be allowed to happen again. He was equally concerned about the cost. The Chiefs of Staff had estimated that in the first year of the war Canada's military expenditures might run as high as $491,689,000, of which $150,364,000 was for air defence.[50] Canada had also offered to extend unlimited credit to the United Kingdom for the purchase of food and war material and on account of this would experience a balance of payment problem with the United States which would only be intensified by large expenditures for air training equipment. Their thinking conditioned by lean years of the depression and not yet accustomed to the shocking expenses of modern warfare, King and the other members of the Cabinet War Committee felt that Canada was already doing all that could be expected. They were in a defensive frame of mind when the British negotiation team, headed by Lord Riverdale, an industrialist and adviser on the purchase of war material, arrived in Ottawa on 14 October.[51]

At a preliminary meeting two days later, Riverdale outlined the basic proposal. It called for the training of 850 pilots, 510 air observers or navigators and 870 wireless operator/air gunners every four weeks, or about 29,000 aircrew a year. Elementary flying training schools were to be established in each of the three Dominions but all advanced flying training as well as the air observer and wireless operator/air gunner training was to be carried out in Canada. The North American training structure was to include twelve elementary flying training schools, twenty-five advanced or service flying training schools, fifteen air observer schools, fifteen bombing and gunnery schools, three air navigation schools and one large wireless or radio training school. To man these schools and their supporting organization fifty-four thousand air force personnel would be required. The number of training aircraft needed was estimated at five thousand.[52] Air Commodore E.W. Stedman head of the Engineering and Supply Branch of the RCAF, noted in his diary that the proposal "was so far ahead of anything that we had thought of that everyone who had not heard of the details before was quite taken aback at its magnitude." Then the question arose, "How much is it going to cost?"[53]

The task of putting a Canadian price tag on all the various items fell to Stedman's branch. The total estimate for capital and maintenance expenditure for a three year period, the length of time the war was expected to last, came close to a billion dollars ($989,859,904). Riverdale made some minor adjustments to Stedman's figures, reducing the estimated cost to $888,500,000 which he presented to members of the War Committee of the Canadian Cabinet on 31 October. The United Kingdom's share, Riverdale explained, was to be in kind, in other words in the form of aircraft, engines, spare parts and accessories valued at about $140,000,000. This left $748,500,000 to be divided among the other three countries. Canada was expected to furnish about one half the trainees and would bear responsibility for one half the balance, or $374,250,000, and Australia and New Zealand the remainder.[54]

The Canadians were astounded by these financial proposals. While expressing a willingness to co-operate King said the cost of the scheme could not possibly be shared in the proportion suggested by Riverdale. It was, after all, "a scheme suggested by the British government and for which the British must be mainly responsible." These sentiments were echoed by J.L. Ralston, the Minister of Finance, who claimed that Great Britain's contribution was far too small. Unless more of the cost was borne by the British, Ralston argued, Canada would be financially bled to death.[55] It was during this meeting that King made the statement, which he later regretted having uttered, that the war "was not Canada's war in the same sense that it was Great Britain's."

As the talks developed the factors involved in reaching a satisfactory decision became ever more complicated. They included not only the direct cost to each partner but touched on Commonwealth trade, and Canada's balance of payments with the United States. The Canadian government laid down two conditions which it considered essential. One was that the British government buy more Canadian wheat and the other was that the amount of Canadian credit extended to the United Kingdom for war purchases would have to be restricted. The question facing the British government, therefore, was whether the training scheme was militarily important enough to sacrifice some credit purchasing and dig deeper into its dwindling gold supply to buy weapons and wheat. The decision went in favour of the training scheme. The British asked that it be given priority over all other war programmes in Canada and accepted the consequent drain on their gold and dollar reserves.[56]

The representatives from Australia and New Zealand arrived in Canada on 3 November and the negotiations, previously centred on Canada's problems, focussed on those of the southern Dominions. In Australia the enthusiasm shown by Bruce for pooling air resources was not completely shared by the government. Neither Australia nor New Zealand had enough appropriate currency to spend on air training in Canada. Moreover, they felt themselves being squeezed by Canada which, concerned over payments it would have to make to the United States, wanted its sister Dominions to pay their share of training expenses monthly and in a form that could be converted into American dollars.[57]

After preliminary discussions, the Australian and New Zealand delegates, acting on instructions from their home governments, said their participation depended on three conditions. One was that the United Kingdom underwrite their monthly payments to Canada. Another was that the total contribution of Dominion aircrew to Commonwealth air operations, which the British had arbitrarily set at 48 per cent for Canada, 40 per cent for Australia, and 12 per cent for New Zealand be recalculated on a basis of population ratios of 57: 35: 8. The third point was that in addition to elementary pilot training seven-ninths of all Australian pilot recruits and a similar proportion of observer and wireless operator/air gunners must be fully trained at home.[58]

As a result of these demands, which were agreed to by Canada and the United Kingdom, the training organization to be established in Canada was reduced in size from the scheme originally presented by Riverdale. The number of service flying training schools for instance, was cut from 25 to 16, the air observer and the bombing and gunnery schools from 15 each to 10, and navigation schools from three to two. Other changes were made for administrative reasons. Before the plan went into effect the British and Canadians had settled on 26 smaller elementary schools rather than thirteen large ones and four wireless schools in place of one.[59]

The aircraft requirement, though reduced from the first estimate of 5,000, still loomed large. The total was calculated at 3,540, including 702 Tiger Moths and Fleet Finches for elementary training, 720 North American Harvards for advanced training for fighter pilots, 1,368 twin-engine Avro Ansons for training both pilots and observers for bombing and coastal operations, and 750 Fairey Battles for teaching wireless operator/air gunners the rudiments of air gunnery. Of the aeroplanes required, Great Britain was to supply all of the Ansons and Battles, 533 of the Harvards plus 133 replacement engines, and half of the engines for the Tiger Moths. The cost of the balance of the Harvards, 187, was to be absorbed by Canada, Australia, and New Zealand. Canada was to be financially responsible for the Tiger Moth air frames, half the engines and for both engines and air frames for the Finches.[60]

All of the aircraft, with the exception of the Fleet Finch, a Canadian-built aircraft equipped with an American-made engine, were standard equipment in British training schools. The Harvard, an American aircraft, universally regarded as the best combat trainer available, had been selected by the Air Ministry in 1938. Canada, which followed suit, had fourteen Harvards in service and fifteen on order when war broke out. In contrast, the British had ordered 400 in the pre-war period and placed a demand for another 533 for training in Canada while the Ottawa negotiations were taking place.[61] By May 1940 orders had been placed for another 310 of these excellent trainers.

The cost of the scheme in its final form was estimated at $607,271,210 from inception to 31 March 1943, the agreed terminal date. The United Kingdom's contribution, consisting mainly of

Harvard instructor and student practice formation flying. (PMR 81-216)

A deHavilland Tiger Moth in flight. Produced in Canada, the Tiger Moth was the most widely used elementary trainer and most of the pilots who were trained in 1940, 1941 and 1942 took their first flights in these machines. A total of 1,384 were delivered to the RCAF plus another 136 designed to take the American Monasco engine in place of the British Gipsy Major. (PL 3582)

aircraft and spare parts, amounted to $185,000,000, leaving a balance of $422,271,210. The cost of initial and elementary training, $66,146,048, was accepted as a Canadian responsibility (Australia and New Zealand were to undertake all training up to and including the elementary stage at home) which left $356,125,162 as the pool of expenditure to be distributed between the three Dominions in the ratio 80.64, 11.28 and 8.08, the proportion of the total number of trainees which each was expected to contribute. Canada's share, not counting the cost of elementary training, was $287,179,331, Australia's $40,170,918 and New Zealand's $28,774,913.[62]

The conditions of service for aircrew trained in the BCATP were patterned after those in effect in the RAF. In contrast to the peacetime practice of enrolling pilot recruits as provisional pilot officers, all trainees were enlisted as aircraftmen class II, which put them at the very bottom of the rank structure. While under training, pilots and observers, the elite among aircrew, were to be advanced to leading aircraftmen and on graduation were to become sergeants. Initially, wireless operator/air gunners were to remain as aircraftmen class II all the way through training but this was changed before the first schools were opened and they too could look forward to attaining the rank of leading aircraftman and then sergeant. The agreement mentioned nothing about commissioning other than a vague statement that "A number of pilots and observers will be selected, on passing out of training, for commissioned rank." In July 1940, about three months before the first pupils of the plan were to graduate, a ruling by the RAF stated that thirty-three per cent of the pilots and observers would be commissioned on graduation and a further seventeen per cent selected from among those who "rendered distinguished service, devotion to duty and display of ability in the field of operations" could be granted commissions later on.[63] The agreement was silent about commissioning wireless operator/air gunners and no provision was made for them until 1941.

The question of control of the training plan was easily settled. Political realities dictated, and King would have it no other way, that overall administration must remain with the Canadian government and military command with the RCAF. The interests of Great Britain, Australia, and New Zealand were safeguarded by a supervisory board on which each of the four countries had a voice. It was to meet monthly under the chairmanship of the Canadian Minister of National Defence (after May 1940 by the Minister of National Defence for Air) and was empowered to make recommendations directly to the Chief of the Air Staff. In addition, through their air liaison officers in Ottawa the other three partners could make representation to the RCAF on matters pertaining to their own personnel. While serving in Canada trainees from outside the country were to be "attached" to the RCAF, meaning that they were subject to its jurisdiction and would receive Canadian rates of pay.[64]

By the end of November the scope and size of the scheme had been settled, a satisfactory cost sharing arrangement had been worked out, a policy of command and control had been adopted, and the selection of air training fields was in progress. The British government now wanted to proceed with initialling the agreement "so that we may ... take this essential step forward in our joint war effort."[65] Before giving final approval, however, King insisted that two conditions, which earlier had been made known to the British,[66] must first be met. One was a satisfactory outcome of the economic and financial conversations, including the purchase of wheat, which were being carried out in London between British officials and T.A Crerar, King's Minister of Mines and Resources, the other was a statement from the United Kingdom emphasizing that the BCATP should take priority over all other Canadian military commitments.

A word of assurance from the British Prime Minister that a mutually satisfactory trade agreement could be reached satisfied King on the first condition[67] but he took a much firmer stand on the priority statement. He had embraced the training plan for political as well as military reasons, seeing it as an effective means of waging war and a project that would be more likely than most to win public support in Quebec since it would be based in Canada and would not involve conscription. But how would Canadian anglophiles, who tended to think of military co-operation in terms of big battalions, react to a training scheme in which Canada's contribution, judging by contemporary standards, was so enormous that it would limit the potential to muster a large land force? To cover his political flanks King shrewdly asked the British to provide a statement for consumption by the Canadian public to the effect that "participation in the Air Training Scheme would provide more effective assistance than any other form of co-operation which Canada could give."[68] Attempting to satisfy King, the Secretary of State for Air, in an address to the British House of Commons on 10 October made a point of mentioning that the BCATP "may in the opinion of the United Kingdom Government prove to be a contribution of the most essential and decisive character."[69] At the time King approved this phrasing but before signing the agreement he asked for something stronger, something that would leave no doubt "that the air training plan should take priority over all other Canadian commitments not already entered into."[70] Chamberlain replied with a paragraph which said almost exactly what was wanted but with the stipulation that the British would welcome no less heartily the presence of land forces in the theatre of war."[71] In accepting this King edited it to his own liking and purpose and gave it emphasis in his broadcast announcing the birth of the BCATP:

> The United Kingdom Government has informed us that ... the Plan ... would provide for more effective assistance ... than any other form of military co-operation which Canada can give. At the same time the United Kingdom Government wished it to be clearly understood that it would welcome no less heartily the presence of Canadian land forces in the theatre of war at the earliest possible moment.[72]

The last phrase was significant. The 1st Canadian Division was already on its way to the United Kingdom and would arrive "at the earliest possible moment": it could therefore be interpreted as being Canada's ground commitment. As Colonel Stacey has expressed it, King's message to the Canadian people was that the war effort should centre on the BCATP and that, as far as land forces were concerned, "it was more important that they should reach the theatre soon than ... reach it in strength."[73]

Before the priority matter was settled another more divisive issue had arisen over the status of Dominion squadrons. The memorandum of agreement contained only one paragraph on this subject, Article Fifteen, and it bore evidence of being hurriedly drafted:

> The United Kingdom Government undertakes that pupils of Canada, Australia and New Zealand shall, after training, ... be identified with their respective Dominions, either by ... organizing Dominion units or in some other way ... The United Kingdom will initiate inter-governmental discussions to this end.[74]

After the agreement was in draft form King had second thoughts about the wording of this paragraph and added, as another condition of his signing, a satisfactory solution to "the question of identity and command of formations in the field."[75] Then, as the British began to hedge, he took a hard stand on what he regarded as a matter of principal and demanded "a clear and unequivocal statement that, at the request of the Canadian Government, Canadian personnel from the training plan would be organized in R.C.A.F. units and formations in the field."[76]

King's concern is quite understandable. He still feared, as did Croil and Rogers, that, unless squadrons composed of Canadian personnel were designated as RCAF, Canada's air effort would be absorbed by the RAF.[77] To the British, however, this demand presented a serious problem, for while they felt that the Dominion squadrons should be distinguished in some way as "Canadian," "Australian," or "New Zealand," they envisaged these units as integral parts of the RAF. Any other form of organization would weaken their control — and therefore the overall efficiency — of Commonwealth air power. Australia, with some reluctance, was resigned to accepting this watered down type of national representation[78] but to MacKenzie King it was intolerable. What the Air Ministry had in mind was illustrated by the formation of 242 (Canadian) Squadron created in October 1939 from Canadian members of the RAF.* It gave Canada immediate, if token, representation overseas and King welcomed the gesture which he referred to in his broadcast announcing the BCATP. But he rejected this style of designation as too obscure for Canadian squadrons which were to be formed under the BCATP agreement. For these units any designation other than RCAF was unacceptable.

One of the objections raised by the Air Ministry to the use of the term RCAF was that in the squadrons in question, though their aircrew might be Canadian, or largely so, the ground personnel who made up about four-fifths of the total squadron strength were to come from the RAF. Could a squadron, only one-fifth of whose members were Canadians, be rightfully referred to as RCAF? The British maintained it could not, and argued that only when both air and ground elements were predominantly Canadian could an RCAF designation be justified.[79] This proposal King refused to consider, for Canada needed all the groundcrew it could muster to launch the BCATP and would have none to spare for operational squadrons, at least not in the forseeable future. Feelings ran high on this and on 15 December the whole plan seemed to be in jeopardy. Riverdale was justly angered by comments that his suggestion to solve the problem by using British ground personnel in the training schools in Canada, and sending Canadians overseas as groundcrew for the RCAF squadrons, was merely a British attempt to substitute Canadians for Englishmen in a battle zone.[80] King, too, was in a fighting mood as a result of another British proposal, telephoned from Whitehall, that the number of RCAF squadrons to be formed should depend on the amount of money that Canada was putting into the training plan. In a telegram to the Dominion Secretary, Anthony Eden, he protested that because of this move to drag financial considerations back into the picture "there is grave danger of the whole training scheme being imperilled."[81]

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* See Hugh Halliday, *242 Squadron the Canadian Years: the story of the RAF,s 'all-Canadian' Fighter Squadron* (Stittsville, Ont.: Canada's Wings, 1981).

Nevertheless, King was determined to get the agreement signed on or before his birthday, 17 December. On the 16th things changed dramatically as a result of intensive meetings between British and Canadian representatives. There were also urgent telegrams and phone calls between Ottawa and London and a meeting with the Governor General, Lord Tweedsmuir, who was literally on his death-bed and whose authority as the King's representative the Prime Minister evoked to bend the British delegates to his will.[82] In the late evening, when members of the British Air Mission were summoned to King's office, Riverdale presented a formula which he and Rogers had worked out together:

> the United Kingdom accepts in principle as being consonant with the intention of Paragraph 15 of the Memorandum of Agreement that the United Kingdom Government, on the request of the Canadian Government, would arrange that Canadian pupils when passing out from the training scheme will be incorporated in or organized as units of the Royal Canadian Air Force in the field.[83]

King accepted this as the proper interpretation of Article Fifteen and was now ready to sign the agreement.

Finding a solution to the problem of squadron status had been complicated by the fact that the costs of the Article Fifteen squadrons, including the pay of the aircrew, the uniforms they wore and the aircraft they flew was to be borne by the United Kingdom. This arrangement was suggested by the British and written into the agreement supposedly to compensate the Dominions for the large expenditures they were asked to make on air training. Nevertheless, it was contrary to the tradition that Dominions paid for their own armed forces and gave some justification for the British to regard these units as integral parts of the RAF. In time the Canadian government would feel compelled to accept financial responsibility for its own overseas squadrons and there would be some regret that it had not done so in the first place. But, judged by 1939 standards, Canada's financial contribution to the BCATP was so enormous that King felt at the time that it fully warranted British taxpayers footing the bill for Canadian representation in overseas operational theatres. Yet, ever cautious, he never went so far as to demand that all Canadian graduates be placed in RCAF squadrons. Had he persuaded the British to consent to this (which would have been extremely difficult) he would have committed his government to a huge expenditure — Skelton estimated it to be $750,000,000 a year[84] — if and when Canada should decide to accept financial responsibility for its Article Fifteen squadrons. As it was he left his options open. He had won the right for the squadrons to be formed on the request of the Canadian government, not the whim of the British, and to be designated as RCAF units.

References — Chapter 1

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The founders of the BCATP. Prime Minister King, unmistakable in the front row, is flanked by members of the negotiating teams. On his right: Lord Riverdale, chief negotiator for the British Government; Senator R. Dandurand of Ottawa; Group Captain H.W.L. Saunders, Chief of the Air Staff, RNZAF; J.L. Ralston, Canadian Minister of Finance; Air Chief Marshal Sir Robert Brooke-Popham, RAF. On King's left: J.V. Fairburn, Australian Minister for Air; Ernest Lapointe, Canadian Minister of Justice; Captain H.H. Balfour, British Under Secretary for Air; Norman Rogers, Canadian Minister of National Defence; Air Marshal Sir Christopher Courtney, RAF. Air Vice-Marshal G.M. Croil, Chief of the Air Staff, RCAF, is standing behind Courtney and C.D. Howe, Canadian Minister of Transport is immediately behind Balfour. (PMR 81-152)NFB photo.

2

The Plan Takes Shape

Zero-Day, the day on which training under the BCATP was to commence, was set for 29 April 1940.[1] On that day No. 1 Initial Training School in Toronto was scheduled to receive the first group of aircrew trainees and the remaining schools were to open progressively month by month. All were to be in operation by April 1942 and capable of turning out approximately 1,500 aircrew every four weeks, or 19,500 a year.[2]

In preparation there was much to be done in the way of constructing new airfields, training instructors and other personnel, and obtaining all the necessary equipment including aircraft. When the training plan was first proposed the pitifully small RCAF could muster only about four thousand men all told; to operate the training organization it would require no less than thirty-three thousand air force personnel plus six thousand civilians. Specialists — flying instructors, skilled tradesmen, engineers, supply technicians, and administrators were in great demand. There was at first no lack of volunteers but because of inadequate facilities and an embarrassing shortage of uniforms, recruiting went ahead by fits and starts. No. 1 Manning Depot at Toronto, where new entries were indoctrinated into service life, was soon filled beyond capacity.* In November 1939 recruiting had to be suspended to allow overworked officers at recruiting centres to catch their breath. It began again in January 1940 with less confusion and at a quickened pace and by the end of March, in just seven months, the RCAF had more than doubled its strength from 4,171 at the end of August 1939 to a total of 10,375. Most of the recruits were ground tradesmen but thousands of young aircrew applicants, who could not be taken in until schools were ready and instructors trained, were interviewed, medically examined, and placed on a waiting list.[3]

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* Until the end of April 1940, when No. 2 Manning Depot was opened at Brandon, Man., all trainees were processed through Toronto.

While growing in numbers the RCAF was also undergoing an extensive internal reorganization. When the war began it had no pay officers, no medical officers, no signal officers, and only two constuction engineers. In peacetime these services had been provided by army personnel but an expanded air force needed — and justified — its own support expertise. This was found in three ways: by training newly enrolled recruits, by absorbing army personnel as in the medical and pay branches, and by recruiting specially qualified civilians directly into the service at the appropriate rank level.

The Directorate of Works and Buildings furnishes a good example of RCAF expansion. Traditionally, construction projects for the air force were looked after by the Royal Canadian Enginers but a few months before hostilities began the RCAF formed its own Directorate of Works and Buildings with a nucleus of two or three specialist officers and a few clerks. With the advent of the BCATP a task of tremendous proportions fell to the new directorate. The Air Council decided to place it under the command of an experienced construction engineer fully acquainted with large scale contracting and chose R.R. Collard, vice-president and general manager of the Carter-Hall-Aldinger Construction Company of Winnipeg. Collard, who came into the RCAF with the rank of wing commander and eventually rose to air vice-marshal, recruited large numbers of engineers and draftsmen from various construction firms and these formed the mainstay of his directorate. His main responsibility, in which his staff was constantly harrassed by rapidly approaching deadlines, cramped working conditions, and a shortage of help, lay in the designing of buildings — hangars, drill halls, and barrack blocks — and supervising their construction. Contracts were awarded by the Department of Munitions and Supply and the construction work was carried out by private building firms. From the time of Collard's appointment more than 750,000 blueprints were issued, 33,000 approved drawings made, and 8,300 buildings constructed. Although the directorate also met the needs of the Home War Establishment by far the greater part of its effort was expended on behalf of the BCATP.[4]

Strange as it may seem one of the most persistent and troublesome problems encountered in the construction of new schools was the development of an adequate water supply system; too often this was left to the last. The result, as many of those who went

May 1940. The overcrowded and poorly lighted drafting room of the Directorate of Works and Buildings, Ottawa, where plans, specifications and blueprints for the BCATP schools were prepared. In 1942 more spacious accommodation was found in the new headquarters building in Cartier Square. (PMR 79-133)

Air force recruits, mostly high school students, await their turn to be interviewed at a recruiting centre. (PL 20912) through the training scheme in 1940 and 1941 will recall, was that it was not unusual for schools (whose daily requirements varied from 20,000 gallons for an elementary flying school to 45,000 for a bombing and gunnery unit) to be opened before plumbing facilities were installed. "There is hardly a school," the Air Minister told the House of Commons, "where there has not been trouble in getting water...."[5] The problem was most acute in the prairie provinces where, in order to find good water it was often necessary to drill several artesian wells, plus innumerable test holes.[6] No. 2 Bombing and Gunnery School at Mossbank in the southern part of Saskatchewan, may be taken as a prime example. A well, located about a mile from the school, was ready when training began in October 1940 but the water was found to be highly mineralized. "The consequences of normal consumption," the trainees were warned, "are most distressing."[7] A second well, some seven miles away, produced plenty of potable water but its use required the installation of a pipeline and elaborate pumping system. In the meantime water was trucked in from a well belonging to the CNR and stored in tanks. Much of it was consumed in cooking and a reserve for fire fighting had to be kept on hand. It was not until 26 November that domestic water mains were opened and washrooms became usable — an event which caused "Much jubilation...."[8] But the rejoicing was premature: for the next year the subject of water — the amount trucked in, the amount pumped, and the amount used — was frequently mentioned in the unit's diary. Leaks in the long pipeline from the new well fashioned from wooden staves bound together with hoops because metal piping was not available, caused sudden drops in pressure which were a source of inconvenience to staff and students and a worry for fire-fighters.[9]

(Mossbank's inadequate water supply was not altogether a misfortune, however. In 1942 Treasury Board, after some persuasion from the Air Minister, gave approval for the installation of an indoor swimming pool as a means of storing additional water for fire protection. One of the best in the province, this facility was used by the people of the isolated community of Mossbank as well as by staff and trainees. No. 5 Bombing and Gunnery School at Dafoe, Sask., where the problem of water supply was almost as troublesome as at No. 2, appears to have been the only other training unit to enjoy the luxury of an indoor pool.)[10]

An especially heavy work load faced the small but rapidly growing Supply Branch which was responsible for requisitioning, storing, and distributing the enormous volume of equipment required for the BCATP ranging from complete aircraft to bits and pieces of clothing. By the end of 1939 requisitions for the bulk of the initial equipment, including aircraft, were in the hands of the War Supply Board, the forerunner of the Department of Munitions and Supply.[11] The production of elementary training aircraft, Fleet IIs and de Havilland Tiger Moths, was well advanced in Canada, though the engines for the former had to come from the United States and for the latter from Great Britain. The initial supply of Harvards was obtained under the "cash and carry" amendment to the American neutrality laws and arrangements were being made to have further orders filled in Canada by the Noorduyn Aviation Company. Material from the United Kingdom, mainly aircraft and engines, but also large quantities of smaller items such as wireless sets, instruments, guns, and photography equipment, began to arrive during the winter months. This flow of material across the Atlantic was not nearly so regular as the Supply Branch would have wished but as yet there was no warning of the serious interruptions that would occur after the fall of France in June 1940.

In implementing the training plan the RCAF, having no illusions as to its own weaknesses, asked for the loan of RAF personnel. This assistance was readily given. A contingent of eighty-five officers and other ranks disembarked at Halifax in January 1940, and more arrived from time to time until the "loaned personnel" numbered about three hundred.[12] They included experienced staff officers, logistics experts, armament officers, and administrators. Some filled positions at Air Force Headquarters, others were employed at the headquarters of the four training commands, at schools, and various other units. Their assistance was invaluable in getting the BCATP launched on schedule. Croil welcomed them as "brother members of our service" while Air Chief Marshal Brooke-Popham, head of the British Air Liaison Mission in Ottawa, emphasized to the new arrivals that they must regard themselves as part of the RCAF and look to the Canadian Air Force Headquarters, not the British Liaison Mission, for their orders and instructions.[13]

In giving the Air Ministry a list of positions to be filled by RAF officers the Canadians included a request for someone of air commodore rank, the equivalent of army brigadier, to serve as Director of Training.[14] Nobody in the RCAF was really qualified for this job which required experience in directing a large training organization and carried with it the unenviable responsibility of serving two masters. The incumbent, while being directly answerable to the RCAF, would at the same time have to satisfy the RAF in all he did. To fill the appointment the Air Ministry chose Air Commodore Robert Leckie whose 1936 memorandum on the advantages of Canada as a training ground had started the BCATP ball rolling. From 1935 until 1938 he had served as the RAF's Director of Training, then had gone out to Malta as Commander of the RAF in the Mediterranean theatre.[15]

Under the Visiting Forces Acts of Canada and the United Kingdom it was easy enough for an officer of the RAF to fit into the organization of the RCAF and *vice-versa*. The regulations were very similar and the ranks and principles of authority were virtually the same. Nevertheless, on his arrival at Air Force Headquarters, Leckie at first found himself in a rather unusual situation. As Director of Training he was directly responsible to Air Commodore G.O. Johnson who commanded the Organization and Training Division of which Leckie's directorate formed a part. Although one of the most capable officers in the RCAF, Johnson was junior to Leckie in seniority, and at one time had served under him. Not only this, but Leckie outranked all the officers of the RCAF with the exception of the Chief of the Air Staff — a graphic illustration of the modest size of the RCAF.*

Leckie's arrival at Air Force Headquarters caused a few minor problems in military protocol and some muffled grumbles. But these were short lived and left no residue of ill feeling. In large measure this was due to the character of the man himself, his unquestioned qualifications, and his pragmatic approach to air force matters. Rather stern and severe in manner and appearance he was nevertheless quiet spoken and temperate in his habits. C.G. Power, who as Air Minister came to know Leckie well, held him in high regard:

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* On first learning of Leckie's appointment Croil, possibly urged by other officers at Air Force Headquarters, had asked the Air Ministry to substitute someone with less seniority but the British adamantly refused. CAS to CANLIAISON, 21 Jan. 1940, "British Commonwealth Air Training Plan," HQ 927-1, I, DHist 80/408.

> He was widely read beyond his technical and professional knowledge, and had a thorough, strictly non-partisan understanding of politics and politicians. He was quiet and unassuming and his counsel was certain to be the result of deliberation and sound thinking. Though he lacked the good cheer and *bonhomie* of Lloyd Breadner, he was popular with the members of the force. . . .[16]

Late in 1940 the Directorate of Training was raised to the status of a division embracing three directorates: Air Training, under the RAF's Air Commodore A.L. Paxton, Technical Training headed by Group Captain D.C.M. Hume, RCAF, and Training Plans and Requirements commanded by Squadron Leader H.L. Campbell who had joined the RCAF in 1930 and was destined to become Chief of the Air Staff in 1957. Leckie, although a member of the RAF, was given a seat on the Air Council as Air Member for Air Training and reported directly to the Chief of the Air Staff. He was promoted to air vice-marshal in 1941 and, as it was something of an embarrassment to Canada to have its air training organization under the direction of a member of the RAF, even though he happened to be Canadian, he accepted a transfer to the RCAF in the following year.[17]

The BCATP had begun to take shape well before Leckie arrived on the scene. While the negotiations were still going on and the Canadian and British delegates were wrangling over economic and other issues, sites for training schools were being selected and aircraft were being purchased. At Camp Borden and Trenton the flying establishments were beginning to concentrate on the training of flying instructors and by February 1940 were being used to the full for the BCATP. The pilot training programme begun before the war was still in effect but with larger intakes. On 1 November 1939, the Intermediate Training Squadron at Borden had been absorbed into the BCATP. In January the Advanced Training Squadron at Trenton was moved to Borden and amalgamated with the Intermediate Squadron to form No. 1 Service Flying Training School of the BCATP. Until 22 July 1940, when it received its first intake of BCATP pupils, the student pilots passing through Borden were considered potential instructors and were trained accordingly.[18] The Armament School, the Wireless School and the Air Navigation School, were also turning out instructors. All three were officially transferred from the Home War Establishment to the BCATP on 2 February 1940.[19] New homes were later found for these units as the training establishment at Trenton became decentralized. The Air Armament School was moved to Mountain View, south of Belleville, Ont., the Air Navigation School to Rivers, Man., and the Wireless School to Montreal.

The burden of administering the BCATP soon convinced Norman Rogers, the Minister of National Defence, that it should be separated from the other work of the Department and placed under a Cabinet Minister. The man picked for the job was C.G. Power, a party stalwart and since 1917 representative for the riding of Quebec South. The provincial election in Quebec had kept him away from Ottawa during the time of the BCATP negotiations but thereafter, although Postmaster General, then not a very demanding portfolio, he was often to be found in Rogers' office. On 8 April,[20] in company with Rogers, he attended a meeting of the Supervisory Board and on two subsequent occasions, on 6 May and 10 May, while Rogers was in England, he sat as Chairman of the Board, but it was not until 23 May that he was sworn in as Minister of National Defence for Air. In this capacity Power worked in close co-operation with Rogers (killed in an aeroplane crash in June 1940) and his successor, J.L. Ralston, but in air force matters he was directly responsible to the Prime Minister. A strong Canadian nationalist Power appears to have entered his new role with some political reservations about the wisdom of the BCATP but these were swept away as the fall of France, coming so soon after the defeat of Poland and Norway, once again demonstrated the overwhelming importance of air power in military operations.

Although essentially a military enterprise, the BCATP developed as a great national undertaking in which civilians and civilian organizations were conspicuous. Because of its experience in airport construction the Department of Transport became involved at an early date. On 10 October 1939 it was agreed that, in the likely event of the training scheme being approved, DOT would undertake the initial selection of airfield sites and, when these had been approved by the RCAF, proceed with their development. The erection of buildings was to be left to the air force. Survey parties of the DOT, aided by provincial highway departments and favourable fall weather, swung into action almost immediately and on 24 January 1940 Croil reported to the Supervisory Board that sites for all the schools planned at that time had been tentatively selected.[21]

Including main aerodromes and relief fields for emergency landings approximately one hundred and twenty flying fields were needed. The DOT was able to offer twenty-four airports that needed little more than extra buildings to make them suitable for training purposes and some fifteen intermediate landing fields that required more extensive modification.[22] This left about eighty new fields to be constructed.

The final decision as to where the various schools were located rested with the Aerodrome Committee of the RCAF, nominally headed by the Chief of the Air Staff. Its working membership changed from time to time but Leckie and Collard appeared to have been two of the permanent members. Representatives of the Departments of Transport and Munitions and Supply were usually in attendance. There were several relevant factors which the Committee took into consideration in making its decision. Sites closer than five miles of the American border were ruled out, as were those in mountainous regions. Bombing and gunnery schools required large areas, approximately one hundred miles square, where training operations would not endanger life or property. Navigation schools were preferably located where trainees would get practice flying over various types of terrain and large bodies of water. In all cases training requirements were the main consideration but other things being equal a site that had potential value as a post-war military or civil airport would be favoured over any other.[23] The schools were distributed throughout four training commands: No. 1 with headquarters at Toronto, No. 2 centred at Winnipeg, No. 3 at Montreal, and No. 4 at Regina.* Since the

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* No. 1 covered Western Ontario, No. 2 all of Manitoba, part of Saskatchewan and the Thunder Bay region of Ontario, No. 3, Québec and the Maritimes, and No. 4 most of Saskatchewan, Alberta, and British Columbia. The headquarters of No. 4 Training Command was moved to Calgary in September 1941.

RCAF intended each of these commands to be as self-sufficient as possible with its own recruiting organization, supply depots, repair depots, and training schools, the sites had to be chosen accordingly.

Civil aviation made one of its most noteworthy contributions to the BCATP through the Canadian Flying Clubs Association whose member clubs undertook the operation of the elementary flying training schools. This was not altogether unexpected for eight of the flying clubs had been training pilots for the RCAF since June 1939 and fourteen more had been given contracts at the outbreak of war. However, when the question of elementary training was raised at a meeting with the British Air Mission in October Croil, while agreeing in principle that the elementary schools should be run by civilians, expressed doubt that the clubs, which were "very scattered" and "weak organizations financially" were equal to the task.[24]

The question of elementary training was still undecided when M.A. Seymour, president of the Canadian Flying Clubs Association, arrived on the scene early in November. He was not invited to Ottawa nor to any of the air training discussions but, feeling that the clubs had a vital role to play in the much publicized training scheme, he was determined to make his views known. His basic proposal, presented to members of the British Air Mission, to C.D. Howe and Rogers and RCAF officers whenever meetings could be arranged, was that instead of thirteen large elementary training schools as proposed in the draft agreement, there should be twenty-six each operated by a flying club or by two or more clubs combining their resources. This was ultimately accepted, though with some misgiving on the part of the air force, and Rogers set up a committee through which it was to be implemented.[25]

Before entering into a contract with the government to operate an elementary flying training school a club had to raise a working capital of $35,000 by local subscription, not for operating expenses, which were guaranteed by the government, but as evidence of stability and good faith. It also had to satisfy the RCAF that it could provide an adequate staff of administrative personnel, technicians, and instructors. When these conditions were satisfied a club was invited to form an operating company under the Dominion Companies Act. It was these companies, really enlarged images of the sponsoring clubs, which operated the elementary flying training schools and dealt with the government and the RCAF. For instance, the City of Quebec Flying Training School Limited, sponsored by the Quebec City Flying Club, ran No. 22 EFTS at Ancienne Lorette.*[26]

Under an agreement similar to that made with the flying clubs the government used the services of commercial aviation companies to operate the air observer schools. One of the differences was that instruction at an air observer school was an air force responsibility and all instructors were members of the service. But the schools themselves were organized on a civil basis and run by a civilian manager. In addition to administrative and housekeeping functions the company also supplied the pilots who flew the aircraft used by the students on navigational exercises. Unlike the flying clubs which were at first entitled to an annual profit not exceeding $5,000 (practically all of which eventually ended up in a government controlled fund) the commercial companies were not permitted to make any profit whatsoever and all savings on operational expenses accrued to the central government. Since salaries and wages were carefully regulated little opportunity arose for private gain.[27]

Yet another important area where civil aviation gave valuable support, and one which conveys some idea of the scope of the BCATP, was aircraft repair. This did not pose a major problem in the first year of the BCATP for most of the aircraft were new and only a few schools were in operation. But with thousands of aircraft in service it followed that maintenance and repair would soon become a task of enormous proportions far exceeding the capacity of the Directorate of Technical Maintenance of the RCAF. In 1941, in co-operation with the RCAF, the Department of Munitions and Supply created an Overhaul and Repair Division embracing several civilian firms and employing 18,000 men and women to help with this work. From 1941, when the planes began to show wear and tear, until the end of the war the Overhaul and

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* All but two of the elementary schools were operated by the flying clubs. The exceptions were No. 11 at Cap de la Madeleine contracted out to a commercial firm, Quebec Airways and No. 23 at Davidson, Sask. operated by the RCAF.

Repair Division repaired and returned to service over 6,500 airframes and 30,500 engines, almost ninety per cent of which were for training machines.[28]

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3

"A BIT OF A PANIC" 1940-1941

Mackenzie King's announcement on 17 December 1939 that Canada was to become "one of the greatest air training centres of the world" brought a rush of aircrew applicants to the recruiting units. Only 229, enough to fill immediate needs, were accepted and recruiting officers spent endless hours explaining to the others, whose names were placed on a waiting list, that they could not be enlisted for the simple reason that training facilities did not yet exist. This caused a large number to change their minds and opt for the army or navy but by 31 March when the opening of some of the training schools was in sight some 2,760 applications remained on file.[1] In April, 166 of the applicants were recalled, enlisted as AC2s and sent to No. 1 Manning Depot in Toronto to learn the basic elements of air force life. On 29 April they were transferred to No. 1 Initial Training School in North Toronto to begin preflight training, the first of thousands who would follow the same path.

The course at No. 1 Initial Training School lasted four weeks. It was a preparation for specialty training and the curriculum included lectures in navigation, mathematics, armament and aerodynamics interspersed with periods of foot drill and physical training. Another function of the initial training school, and one that was of vital concern to recruits, most of whom had their heart set on becoming a pilot, was the sorting of trainees into the various aircrew categories. The selection procedure began with recruiting officers who tentatively accepted candidates into the broad category of "pilot or navigator" if they had the physical and educational background for these specialties. Those lacking the necessary qualifications were enrolled as wireless operator/air gunners. The final selection was made at initial training school. In making their decision the authorities took into consideration each candidate's overall ability but in assessing pilot potential special emphasis was given to performance on the "visual Link" a training device that could simulate the movements of an aeroplane in flight. A poor mark on the Link Trainer virtually barred the way to pilot training. Of the 164 recruits who entered No. 1 Initial Training School on 29 April six dropped out for one reason or another, twenty-five were chosen as wireless operator/air gunners, forty-one as observers and ninety-two as pilots.

For training in their specialties the wireless operator/air gunners were sent to No. 1 Wireless School at Montreal and the observers to No. 1 Air Observer School at Malton. As no elementary flying schools were in operation the pilots were sent in groups of six or seven to flying clubs from Vancouver to Moncton. During this phase of training which lasted seven weeks, twenty-one recruits either failed or were taken off course, a wastage rate of 23 per cent which was close to average for elementary training — the theory being that weaker pilots should be weeded out as early as possible. The 71 successful candidates were divided into two groups, forty-five going to No. 1 Service Flying Training School at Camp Borden and twenty-six to No. 2 SFTS at Uplands Airport at Ottawa.

The first class of BCATP pupils had hardly begun their training when the war entered a critical phase. In April, Denmark and Norway were conquered; in May and June, Holland, Belgium, and finally France fell to the Nazis and Britain was under siege. At the time the BCATP was little more than a collection of partly finished schools and in Canada there was some discussion as to whether it should be curtailed in size, or even abandoned in favour of sending all possible aid to the United Kingdom.[2] However, although the British were now facing a serious shortage of pilots they were counting on the BCATP for future air needs and urged Canada "to exert every effort to make it productive to the fullest practicable extent in the shortest possible time."[3] In the same message the British government warned that the export of Fairey Battles and Avro Ansons, the former required for bombing and gunnery schools and the latter for air observer schools and two thirds of the flying training schools, would be temporarily suspended. The BCATP depended on a regular supply of these aircraft and, in Power's words, the British announcement "sent most of us into a bit of a panic."[4] To add to the problem the recruiting programme was now in full swing and the flow of recruits could not be held back without seriously affecting public morale.

Fortunately the RCAF had a good supply of elementary trainers — Tiger Moths and Fleet Finches — which were made in Canada. The supply of British-built engines for the former held out and the latter were powered by readily obtainable American engines. Taking advantage of this situation the RCAF decided to open eight elementary flying training schools in June and July instead of only three as called for in the original schedule.[5] This meant that almost seven hundred pupils[6] could be put under instruction without delay but, owing to the shortage of aircraft for service flying training schools, the RCAF had no clear idea of what was to be done with these fledgling pilots once they completed the elementary phase.[7] Nevertheless, the arrangement bought precious time to re-examine aircraft inventories and look for substitutes and fresh sources of supply.*

The greatest obstacle was the lack of twin-engined Avro Ansons. Only fifty-nine had been delivered by the end of May, not enough to equip one school. Although the British promised that shipments would be resumed the Canadian government, rightly fearing the situation would get worse, and greatly concerned about the lack of spare parts for Ansons, decided to undertake the manufacture of these aircraft in Canada using an American engine and American instruments. This project, undertaken by Federal Aircraft Limited, a crown corporation, received the blessing of the British and was to become the largest aircraft manufacturing programme carried out by Canadian industry with the production of Harvards being second. But it was a long-term solution and did nothing to alleviate the current aircraft shortage. Although the supply of Harvards was assured since they were produced on this side of the Atlantic — by North American Aviation in California and their Canadian licensee, Noorduyn Aviation of Montreal — there were not nearly enough of them in the summer of 1940. Only thirty-three were available by 30 June, including twenty-eight ordered by the RCAF just before the war and five delivered by

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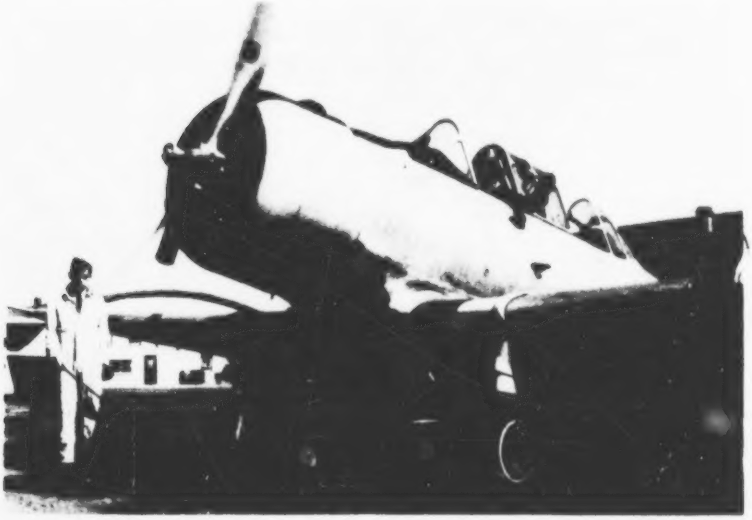
[*] For a complete list of aircraft used in the BCATP see John A. Griffin, *Canadian Military Aircraft: Serials and Photographs* (Ottawa: Queen's Printer, 1969), 670-672.

North American Aviation, the first part of the order of 533 placed by the United Kingdom for the BCATP.[8] Various other types of aircraft were investigated in the United States and an order was placed for one hundred and eighty Cessna Cranes, a light two-engine transport used for training purposes by the United States Army Air Corps. Eventually eight hundred and twenty Cranes were purchased but delivery did not begin until December 1941.[9]

The problem facing the RCAF was made somewhat easier by the timely acquisition of one hundred and nineteen North American Yales. These aircraft, originally ordered by the French government and shipped just before France fell were rerouted to St. Pierre and Miquelon where they were picked up by the British and transferred to the de Havilland plant in Toronto for inspection and reassembly.* Twenty-seven were delivered to the RCAF in July,



One of the 119 Yales obtained for the BCATP in the critical summer of 1940. Manufactured by North American Aviation for the French government, they were redirected to Canada after the collapse of France. Used at first for pilot training they were later replaced by Harvards and were then modified for training wireless operators. (PL 2222) sixty-five in August, and the remainder in September and October. Similar in design to Harvards but lighter they were intended as intermediate trainers. They were first used in this role, along with Harvards as advanced trainers, at No. 1 and No. 2 Service Flying Training Schools and later at No. 6 at Dunnville and No. 14 at Aylmer in Ontario which were opened respectively in November 1940 and July 1941.[10]

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* Instruments in the Yales were calibrated metrically and the throttle levers operated in the reverse fashion to those in British aircraft. Stangely, perhaps, this seems to have posed no problems.

At the end of August the aircraft situation was far from satisfactory but the future looked a little brighter as a result of the procurement of Yales, a resumption in the delivery of Ansons, and an increase in the provisioning of Harvards to just over twenty a month. By stretching its supply of instructors and aircraft rather thinly the RCAF managed to put No. 3 and No. 4 SFTS at Calgary and Saskatoon into operation in the early fall and, as the aircraft situation showed further signs of improving, opened four more service flying training schools and eight elementary schools before the end of the year. All twelve schools received their first intake of pupils several weeks ahead of schedule.[11]

The flow of trainees was further accelerated by decreasing the period of instruction. In July, on notice from the Air Ministry, the time spent at elementary flying training establishments was shortened from eight weeks to seven and at service flying schools from sixteen weeks to fourteen. The original requirement of fifty hours in the air at elementary schools and one hundred at service schools was retained by stepping up the tempo and relegating more ground instruction to the initial training schools.[12] In August the Air Ministry announced that the service flying course was to be further reduced to ten weeks and was to include only seventy-five hours of flying time. The lost time, two weeks spent at bombing and gunnery school, was to be made up at RAF operational training units overseas where BCATP graduates continued their instruction before being assigned to combat duty.[13] These changes were introduced into the Canadian system during the fall and winter.[14] Together with the accelerated opening of additional schools they resulted in a considerable speeding up of pilot training. In November the Chief of the Air Staff was able to forecast an output of 358 trained pilots by the end of the year compared to 102 as originally scheduled and a total production for 1941 of 7,754 in place of 3,196.[15]

TABLE A-1

Elementary flying training schools and service flying training schools opened in 1940 and 1941, showing the original and advanced dates of opening and approximate acceleration.

EFTS	Location	Original Date	New Date	Acceleration
No 1	Malton, Ont	24 June	24 June	
No 2	Fort William, Ont	24 June	24 June	
No 3	London, Ont	19 August	24 June	8 weeks
No 4	Windsor Mills, Qué	19 August	24 June	8 weeks
No 5	Lethbridge, Alta	14 October	22 July	12 weeks
No 6	Prince Albert, Sask	14 October	22 July	12 weeks
No 7	Windsor, Ont	9 December	22 July	20 weeks
No 8	Vancouver, BC	9 December	22 July	20 weeks
No 9	St Catharines, Ont	17 February 1941	14 October	18 weeks
No 10	Hamilton, Ont	17 February 1941	14 October	18 weeks
No 11	Cap de Madeleine, Qué	3 March 1941	14 October	20 weeks
No 12	Goderich, Ont	3 March 1941	14 October	20 weeks
No 13	St Eugene, Ont	31 March 1941	28 October	22 weeks
No 14	Portage la Prairie, Man	28 April 1941	28 October	24 weeks
No 15	Regina, Sask	28 March 1941	11 November	18 weeks
No 16	Edmonton, Alta	7 July 1941	11 November	32 weeks
No 17	Stanley, NS	7 July 1941	17 March	16 weeks
No 18	Boundary Bay, BC	18 August 1941	10 April	13 weeks
No 19	Virden, Man	27 October 1941	16 May	21 weeks
No 20	Oshawa, Ont	8 December 1941	21 June	23 weeks
No 21	Chatham, NB	16 February 1942	3 July	29 weeks
No 22	Québec, Qué	16 February 1942	29 September	18 weeks

SFTS	Location	Original Date	New Date	Acceleration
No 1	Camp Borden, Ont	22 July	22 July	
No 2	Ottawa, Ont	2 September	5 August	4 weeks
No 3	Calgary, Alta	16 September	28 October	-6 weeks
No 4	Saskatoon, Sask	28 October	16 September	6 weeks
No 5	Brantford, Ont	9 December	11 November	4 weeks
No 6	Dunnville, Ont	20 January 1941	25 November	8 weeks
No 7	McLeod, Alta	3 February 1941	9 December	8 weeks
No 8	Moncton, NB	14 April 1941	23 December	16 weeks
No 9	Summerside, PEI	28 April 1941	6 January	15 weeks
No 10	Dauphin, Man	9 June 1941	5 March	12 weeks
No 11	Yorkton, Sask	23 June 1941	10 April	8 weeks
No 12	Brandon, Man	1 September 1941	16 May	14 weeks
No 13	St Hubert, Qué	13 October 1941	1 September	4 weeks
No 14	Aylmer Ont	22 December 1941	3 July	14 weeks
No 15	Claresholm, Alta	2 February 1942	8 June	32 weeks
No 16	Hagersville, Ont	13 April 1942	8 August	32 weeks

In comparison to the changes made in pilot training, only minor alterations were made in the courses for air observers and wireless operator/air gunners. Training of observers began on 27 May 1940 at No. 1 Air Observer School at Malton with a class of thirty-four recruits from No. 1 Initial Training School. This group and those who came after them followed with slight variations the syllabus laid down by the RAF at the beginning of the war which called for two months at an air observer school concentrating on the theory and practice of aerial navigation, a month at bombing and gunnery school (areas in which air observers were expected to be proficient), and a month at an advanced navigation school studying astro navigation. The number of navigators trained in 1940, one hundred and fifteen, was just twenty-one short of the actual number anticipated under the BCATP agreement.[16]

The course for wireless operator/air gunners consisted at first of twenty-four weeks at wireless school followed by four weeks of bombing and gunnery practice. The period spent at wireless school, which was altered a number of times during the war, was shortened to eighteen weeks thus providing an increase in the number of personnel trained in 1940 from an estimated fifty-eight under the old schedule to one hundred and forty-nine.[17] Although the BCATP agreement made no provision for training air gunners, as distinct from wireless operator/air gunners, a special course for fifty-eight for the Canadian home defence squadrons was conducted at No. 1 Bombing and Gunnery School, Jarvis Ont. from 30 September to 27 October.[18] Nineteen more air gunners were trained before the end of the year and sent overseas.*[19]

The programme of bombing and gunnery training depended on the supply of guns, bomb sights and other armament equipment from the United Kingdom. These items arrived most irregularly and seldom in the quantity required; worse still, in the summer of 1940 the shipments were temporarily suspended. Canadian manufacturers were then asked to undertake the production of armament requirements for both the Home War Establishment and the BCATP. Delays were encountered both in tooling the factories and acquiring the necessary blueprints from the United Kingdom and production did not hit full stride until late in 1941. In the meantime bombing and gunnery schools had to get along as best they could making maximum use of the material that arrived from the United Kingdom from time to time, modifying American equipment to meet Canadian requirements, and manufacturing locally bits and pieces otherwise unobtainable. In place of the standard Browning .303 machine-guns the first classes of BCATP pupils practiced with obsolete Lewis and Vickers weapons. Because gun turrets were not always available, air-to-air firing was sometimes done with a single gun on a flexible mounting in the rear cockpit, much as in the First World War.[20]

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* Until 1942 air gunners were trained mainly in the United Kingdom. Consequently, there was a deficiency of Canadian air gunners for Article Fifteen squadrons which often used RAF gunners.

All personnel trained under the BCATP in 1940 were Canadians except for forty Australian pilots. This group, the vanguard of 9,600 Australians to be trained in Canada during the war, disembarked at Vancouver on 27 September and were greeted by Air Minister Power. With little delay they entrained for Ottawa and No. 2 Service Flying Training School. At their new unit the Aus-

Fairey Battles were used at Bombing and Gunnery Schools for gunnery training and also for target towing. On many of these aircraft the obsolete open cockpit gun mounting was replaced by modern electrically operated gun turrets. The weapon in the photograph is a Vickers "K" gun. (PL 964)

Some of the first Australian pilot trainees to arrive in Canada try their hand at making snow balls — a novelty for them. No. 2 SFTS, Ottawa, November 1940. (PL 1831)

tralians, distinctive in their dark blue uniform, received a hearty round of applause from Canadian airmen "to show our Australian cousins how welcome they are in our midst."[21] On 2 October flying training began for the new arrivals who had completed elementary training at home. On 22 November thirty-seven of them graduated as Course No. 6 at the Ottawa school, their pilot's wings being presented by Major-General Sir William Glasgow the High Commissioner for Australia. The next week they were briefed on embarkation procedures and left Ottawa on 14 December en route for the United Kingdom.[22]

The first class of Canadian pilots to graduate under the BCATP completed their training on 5 November at No. 1 SFTS but they were assigned to duty in Canada. Seven went to home defence squadrons and twenty-seven were ploughed back into the BCATP most of them as instructors.[23] Subsequent classes were distributed in similar fashion. Of two hundred and three Canadian pilots who received their wings in 1940 only twenty were posted to the United Kingdom, ten going to RCAF squadrons* and ten to the RAF. A few of the others went as reinforcements to home defence squadrons but one hundred and sixty-five found themselves back in the BCATP as instructors or staff pilots for routine flying chores.[24]

The Canadian observers who had begun their training at No. 1 Initial Training School on 29 April received their observer badges on 26 October and were immediately detailed for service overseas. In November and December they were followed by two more classes of observers, seventy-seven pupils in all, one hundred and forty-nine wireless operator/air gunners, and nineteen air gunners, graduates of No. 1 Bombing and Gunnery School at Jarvis, No. 2 at Mossbank, Sask. and No. 4 at Fingal, Ont. Except for the ten pilots sent to RCAF squadrons overseas the Canadians were absorbed into the RAF most of them going to Bomber Command.[25]

Sprouting newly won air observer badges and sergeant stripes, members of the first class of air observers of the BCATP are on their way to the United Kingdom. Only one in three would return to Canada. (PL 1828)

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* During 1940 three RCAF squadrons of the home war establishment were sent overseas, No. 110 (Army Co-operation), No. 1 (Fighter), and No. 112 (Army Co-operation).

Three aircrew graduates, an American and a New Zealand pilot and a British air observer draw additional kit from clothing stores before leaving Canada. (PL 5288)

At the first wings parade at No. 12 SFTS, held inside a hangar on a rainy afternoon, Mayor Young of Brandon presented an engraved plaque to the honour student, LAC E. C Holdaway of New Zealand. 6 August, 1941. (PMR 81-142)

These achievements, commendable though they were under the circumstances, seemed meagre enough against the background of the Battle of Britain and other military events of 1940. Canada had already sent an army division overseas and a second would soon follow while two more were being mobilized. The general public greeted these measures as concrete expressions of the country's defence policy but viewed the step-by-step unfolding of the BCATP with a mixture of confusion and distrust. This attitude became evident through criticism in the press and questions raised in Parliament and convinced Power and the Deputy Minister for Air, J.S. Duncan,* "that the whole plan of air training with its schedules and ... somewhat incomprehensible delays ... had to be sold to the public through well-planned ... publicity." The approach was "to speak well of patience, and hold up the picture of eventual air supremacy to the people of Canada."

> ... it was ... difficult to make a people, thinking largely in terms of the last war, of locally based regiments, brigades, and divisions, turn their minds to the support of a plan that would send overseas thousands of individuals unattached to any particular province or even identified with the country itself.[26]

To let the people know what was being done Duncan formed the Directorate of Public Relations** within the RCAF.[27] Yet Power was the chief spokesman for the BCATP. In the House of Commons he frequently reviewed the progress of the plan. He took time to explain to individual members, either on the floor of the House or in private conversation, why construction at some schools was proceeding slowly or had not yet started. To clear up misunderstandings of the training and duties of aircrew he provided charts showing the sequence of instruction given to pilots, air observers, and wireless operator/air gunners. Tables were presented listing the various kinds of schools, their location, the amount of money spent on their development, and even the number of buildings each contained. A glance through the 1940 and 1941 editions of Hansard will show that Parliament devoted more attention to the BCATP that to any other aspect of Canadian military policy. No believer in red tape, Power sometimes shocked the security-minded British with his readiness to answer questions on what was a military plan. The only item on which he sealed himself to secrecy was the number of graduates proceeding overseas; at the request of the British he divulged only a limited amount of information on plans to move RAF schools to Canada.

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* Duncan, one of C.D. Howe's "dollar a year" recruits from industry, had formerly been General Manager of the Massey-Harris Company.

** This organization was headed by W.G. Clark of the Toronto *Daily Star* and I. Norman Smith of the *Ottawa Evening Journal*. It covered RCAF activity in every theatre but one of its first functions was to give publicity to the BCATP. "Captains of the Clouds," a Warner Brothers picture, filmed at No. 2 SFTS Uplands was a brain-child of the Directorate. Air Member for Personnel, "History of RCAF Directorate of Public Relations," Miscellaneous Sectional Histories, 1-3. DHist 80/395.

Power's oratory, if not eloquent, was colourful and his meaning unmistakably clear. Talking about the problem of obtaining spare parts and engines he described it in 1940 as "a headache" but in 1941, as the aircraft began to show signs of wear and tear, it was "arthritis, phlebitis, St. Vitus dance and everything else put together .... We are carrying on thousands of hours of bombing, and our demands for spares are enormous...." While there was no serious hold-up in training he admitted "that the going is pretty tough, and ... we shall have a hard time keeping those planes in the air."[28] Although Power himself often felt frustrated by the obstacles confronting the Plan he expressed confidence that it would win through. Typical was a speech in July 1940:

> The plan is proceeding; the work is progressing ... we are not yet out of the woods ... but we can see a picture, not finished, not complete, but ... less gray and nebulous than it was ... We need help. Tell us what is lacking; point out what is wrong ... show us where the drawbacks are.
>
> Those of us who are closely associated with the plan ... believe it will win through. We have been told that it is Canada's most important contribution to the common effort and ultimate victory. We are determined that it shall be.[29]

References — Chapter 3

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4

The RAF Schools

On 13 July 1940 the Canadian government was informed that the RAF wished to move four service flying training schools from the United Kingdom to Canada.[1] This was no surprise. At the beginning of hostilities the British government had intimated that such a move might be desirable but after the inauguration of the BCATP nothing further had been heard of the matter, presumably because the Air Ministry felt that the RCAF had all it could reasonably be expected to handle in the BCATP without accepting responsibility for additional training units. However, when the war took a turn for the worse in the spring of 1940 the project was reviewed in correspondence between Ottawa and London culminating in a formal request from the British government. Once Norway, Denmark, and France had fallen, the operational pressure on British airfields and airspace demanded that training activities be kept to a minimum. Could the Canadians help?

Air Minister Power, after conferring with Cabinet colleagues and the Chief of the Air Staff, told Sir Gerald Campbell, the British High Commissioner who had succeeded Sir Francis Floud, that the four schools could be accommodated without seriously hindering the progress of the BCATP.[2] If the British wished to transfer more schools, room for them could also be found. "Canada," Power said," must do her best to co-operate at this most critical time."[3] It was understood, however, that all costs must be borne by the United Kingdom. On receiving this news the RAF revised its request to include eight service flying training schools, two air observer schools, one bombing and gunnery school, one air navigation school, one general reconnaissance school, and one torpedo bombing school. All were to be moved complete with staff and equipment.[4] The leading echelon of the first one, No. 7 Service Flying Training School from Peterborough, England, sailed for Canada on 29 August.

A site at Collins Bay, near Kingston, Ont., was hurried to completion for the British SFTS which, to avoid confusion with schools of the BCATP, was redesignated No. 31.* Carpenters and painters were still at work when the first party arrived on 9 September. By the end of October the aircraft maintenance facilities were organized, the supply centre was functioning, and mess halls were open. The staff numbered only 349 all ranks, about one third of the established strength, but nevertheless the school was ready for its first class of pilot trainees. Its assigned role was to train pilots for the Fleet Air Arm but as naval ratings were not expected until the end of the year the first pupils were drawn from the BCATP and were designated for service with the RAF or RCAF.[5]

The school was equipped with Fairey Battles. They were shipped from England and during No. 7 SFTS' first nine months in Canada it experienced great difficulty in obtaining spare parts — a common complaint of most service flying training schools. In spite of the ingenuity of the ground tradesmen in recycling used parts and manufacturing new ones, and some assistance from the inmates of the Kingston penitentiary who produced bomb racks and ring sights in the prison shops, there were times when almost half the Battles were unserviceable, with consequent lost hours of flying training time. On 24 January 1941 the Commanding Officer complained that "Of our total available aircraft sixteen are standing by ... unserviceable ... pending the arrival of spares."[6]

Naval ratings began arriving from the United Kingdom at the end of December and from that time on they constituted the bulk of trainees passing through the school. One of them was Robert Hampton Gray of Trail, B.C. who, some four years later, on 9 August 1945, (the day on which the second atomic bomb was dropped on Nagasaki and on which the Japanese government offered to surrender) lost his life leading an attack on a Japanese destroyer, an action for which he was posthumously awarded the Victoria Cross. In becoming a pilot Gray took a different route from most of his peers. Leaving the University of British Columbia in 1940 he joined the Royal Navy and in England volunteered for service with the Fleet Air Arm. As the RAF had been training naval pilots since the beginning of the war, Gray took his elementary training at No. 24 EFTS at Luton, England. He returned to

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* Numbers 31 and above were reserved for RAF schools transferred to Canada or formed in Canada by the RAF.

Canada at the end of May in company with nine other leading seamen of the Royal Canadian Volunteer Reserve to continue training at Collins Bay, then in the process of re-equipping with Harvards. His course, No. 20, which included a total of thirty-nine naval ratings, six naval officers, and two members of the RAF, graduated on 1 October.[7]

On 5 September, just a few days after the rearguard of what was now No. 31 SFTS had left England for Canada, Prime Minister Churchill advised MacKenzie King that because the Battle of Britain was still "raging with unabated vigour" the transfer of additional schools would be delayed. But he urged that "... there could not safely be any relaxation of your efforts to get facilities ready for us ... I ask that the utmost effort should continue to be made...."[8]

The change in policy regarding the movement of schools arose in a dispute between Archibald Sinclair, Churchill's Secretary of State for Air, and Lord Beaverbrook, the Canadian newspaper tycoon, who, in May 1940, had become Minister of Aircraft Production in the British government. Sinclair, fearing that training would be restricted by fighter operations and realising that training aircraft would be of little use in defending Britain,* wanted the schools out of the country as quickly as possible. Beaverbrook, on the other hand, viewed the schools as a secondary line of defence and strongly objected to sending pilots and aircraft out of the country when England was under attack. This was not the first, nor the last, time that the two men quarrelled over air policy. Beaverbrook, always ready to duel with the Air Ministry, was critical of the BCATP from the very first. "What is the Training Scheme anyway?" he asked Churchill. "It's effect is to add two sea voyages to a man's training term. This involves delay, as well as danger, which could only be justified by a breakdown in the training programme in Britain."[9] In the short term he was right and, for the moment, his views prevailed. But British air space would have been impossibly overcrowded had an attempt been made to train all the aircrew that the RAF desired in the United Kingdom. Once the crisis was over, the transfer of British schools to Canada had to recommence.

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* At least one training aircraft was shot down by enemy aircraft. Peirse to Secretary of State for Air, 21 July 1940, PRO, Air 8/376.

The promptness with which airfields were made ready for the RAF shows how vigorously construction was being pushed. Never before had the Canadian construction industry experienced such a burst of activity. Aided by the standardization of plans and specifications, contractors were able to move quickly. So quickly, Howe told the Supervisory Board, that once sites were ready for heavy machinery to move in aerodromes could be completed with all buildings, including hangars, barracks and workshops, and hard surfaced runways one hundred feet (30 m) wide and twenty-five hundred feet (750 m) long laid out in triangular form, within the incredibly short space of eight weeks.[10]

The movement to Canada began in earnest in October 1940, when No. 31 Air Navigation School was transferred. No. 32 SFTS arrived in November, No. 33 early in December, and No. 31 General Reconnaissance School just a few days before the end of the year. The British, anxious to set an example in the efficient management of air training schools, lost little time in getting them into operation. But full expansion was often delayed by the many problems encountered in their new environment. The Air Navigation School was relocated at Port Albert, Ont. Arriving on 25 October the first party found the "Camp in a state of construction, no roads, mud everywhere." Ground lectures were begun on 18 November "temporary accommodation being utilised in the Officers Mess, owing to non-completion of Ground Instruction Section." The first of their Anson aircraft, re-assembled at the de Havilland plant in Toronto, were flown in on 19 November, but a heavy snowstorm then kept them grounded until 10 December when flying began on snow compacted runways* another new experience for the British.[11]

In November No. 32 SFTS arrived at Moose Jaw, Sask. following "a somewhat fearsome voyage" during which the ship carrying the main party was forced to manoeuver to avoid the German battleship *Admiral Scheer* whose gun flashes, seen in the distance, signalled the end of HMS *Jervis Bay* and five ships of convoy HX84.[12] That experience brought the war home to the airmen in a very immediate, realistic way, and encouraged them to get their flying training programme into effect without delay. Christmas festivities were curtailed and in spite of the rigours of winter to which the newcomers were unaccustomed ("They understood twelve degrees of frost (-11°C), but were quite unfamiliar with forty-four degrees of frost (-23°C)."[13]). Training began on the 9th of December.[14] But at least in one respect 32 SFTS was more fortunate than some of the other transferred schools. It was singled out to use Harvards and started off with new aircraft, so had no immediate concern about spare parts.

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* It was not until 1942 that snow blowing equipment began to come into regular use. Before that, and at some schools throughout the war, winter flying was done from runways on which the snow was compacted by heavy rollers. "History of Construction Engineering," section 44, DHist 74/20.

About the same time that 32 SFTS was settling in at Moose Jaw, No. 33, formed originally at Wilmslow, near Manchester, England, was moving into a new base at Carberry, Man., in No. 2 Training Command. The leading elements reached their destination on 8 December and found the general plan of the airfield, a typical service flying training school,

> not dissimilar to that of many British Stations, but unfortunately the work was not completed....The heating system although sufficiently advanced to protect the airmen...had not yet penetrated to the hangars, the Drill Hall, the Officers' Quarters, and sundry other buildings. The water supply was drawn from temporary sources, which entailed temporary lavatory accommodation. However...it was very clear that every effort to press forward the completion of the work was being energetically made. The aerodrome surface consisted of compacted snow and a perfect surface was available, three runways in triangular form being available for bad weather landing....Five completed hangars, less heating, were available together with excellent lecture room accommodation in a separate building.[15]

As the school's Ansons had to be reassembled by the maintenance crews with only one heated hangar to work in, flying did not begin until the end of January and there were then only thirty-four aircraft for one hundred and twelve pupils. This disparity was partly remedied by the loan of twelve Harvards from 32 SFTS which were used until the end of May when they were replaced with Ansons.[16] At the end of June 1941 the school had sixty-eight Ansons on strength but twenty-six were grounded owing to the perennial lack of spare parts. Not until 1943, when 33 SFTS was furnished with Canadian-built Ansons, was the situation greatly improved.

Snow rollers at No. 36 SFTS, Penhold, Alta. The heavy rollers compacted the snow into a hard icy surface several inches thick. (PMR 79-44)

At the request of the British government a minimum of publicity was given to the movement of the RAF schools. Nevertheless, the news leaked out and most of them received an enthusiastic welcome. At Winnipeg, en route to Carberry, the first members of No. 33 were met officially by Air Commodore A.B. Shearer, Air Officer Commanding No. 2 Training Command and were also given "a very cheerful reception" organized by the No. 112 Squadron Ladies Auxiliary* and the Wartime Pilots and Observers Association. Christmas proved to be "the culminating point of the great wave of hospitality" with invitations pouring in from Winnipeg, Carberry, and other communities.[17]

No. 31 General Reconnaissance School, whose function was to train pilots and observers in the techniques of ocean patrol, was also favourably impressed with its welcome to Charlottetown, PEI a few days after Christmas. A civic deputation met the airmen on their arrival by train from Halifax and a fleet of taxis provided by the city council took them to the airfield about four miles from the town. To their amazement "The hangars, quarters, and Airport lights were ablaze and gave all concerned a vivid impression after the 'black-out experiences' in England....all agreed that the RCAF had done a magnificent job of work in so few weeks."[18]

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* No. 112 (Army Co-operation) Squadron, a pre-war NPAAF unit based in Winnipeg, was one of three home defence squadrons sent overseas in 1940. In 1941 it was redesignated as No. 402 (Fighter) Squadron.

In March 1941 the British again revised the number of schools they would like to move out of the country to include, in addition to those already in Canada, nine more service flying training schools, fifteen elementary flying training schools, ten air observer schools, and four operational training units. Although this added considerably to the burden of the RCAF, the Canadians, with growing confidence in their own ability, and somewhat apprehensive that the schools would otherwise be located in the United States (which might be interpreted as a reflection on their managerial capabilities or willingness to help) readily agreed.[19] This meant additional construction but to keep it to a minimum more extensive use was made of existing facilities. Some schools were doubled in size and, where feasible, relief landing fields were developed as full-sized schools. During 1941 training space was found for twelve RAF schools in addition to the five that had been moved in 1940. As thirty-three BCATP schools were also opened during the year, plus several miscellaneous supporting units, it is clear that air training in Canada had far outgrown the dimensions of the original plan.

During the war the RAF operated altogether twenty-six aircrew training schools in Canada, plus No. 31 RDF (Radio Direction Finding) School at Clinton, Ont.,* and No. 31 Personnel Depot at Moncton, NB, a reception centre for members of the RAF moving to and from Canada and the United States.[20] Since the establishment of these units varied from time to time, and since Canadians, Australians, and New Zealanders made up about ten per cent of the staff, it is difficult to determine the number of RAF personnel they employed. The total, however, would run well up into the thousands. The establishment of each of the service flying training schools, bombing and gunnery schools, and general reconnaissance schools was in the neighbourhood of one thousand. An air navigation school had approximately five hundred, and the naval air gunners school about the same. The elementary flying schools were operated by the Canadian Flying Club Association and had relatively few service personnel. When it is further considered that 47,406 British airmen were trained in Canada it is obvious that the RAF presence in Canada was a sizeable one. The prairie provinces received the greatest influx, six schools being located in Alberta, seven in Saskatchewan and two in Manitoba.

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* No. 31 RDF School was, for a time, the only one of its kind in North America and Americans as well as Canadians trained there. In July 1943 it was 'Canadianized' and redesignated No. 5 Radio School. AMP Sectional Histories, "Radar in the RCAF," 30-34, DHist 80/395.

The legal status of RAF schools in Canada (and RCAF squadrons overseas) was governed by the Visiting Forces Acts of Canada and the United Kingdom — identical statutes passed by the respective governments in 1933 to facilitate the posting of forces from one country to the other. By mutual consent the transferred schools were declared to be "acting in combination" with the RCAF which simply meant that they were subject to its administrative and operational control. The RAF schools in No. 2 Training Command, for instance, could be ordered by the RCAF Air Officer Commanding to make alterations in their training programme, carry out special manoeuvres, or post personnel to some other unit. On the other side of the coin the British had access to supply, medical, maintenance, and other services of the RCAF. Within this system there was room for the preservation of national identity and the RAF units were commanded by their own officers and more or less followed their own customs and traditions. The latter did not, of course, differ greatly from those of the RCAF. However, at times the application of the Visiting Forces Acts "gave much employment to lawyers and many headaches to staff officers."[21]

There was really little difference between the British units and those established by the RCAF under the BCATP. The former were at first somewhat larger, but to simplify matters they were, where feasible, made identical in numbers of personnel and types of equipment to Canadian Schools.* Nearly all of their pupils came from the United Kingdom though they had a good sprinkling of trainees from all parts of the Commonwealth, including Canadians, and from the countries of occupied Europe. For all practical purposes they formed an extension of the BCATP but were not officially incorporated as part of it until July 1942. Up to that time the United Kingdom accepted financial responsibility for them, though Canada, on a recoverable basis, made heavy expenditures on their behalf.

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* There were two notable exceptions in aircraft types. Most of the British twin-engine schools flew Airspeed Oxfords instead of Ansons and three of their elementary schools, for a very brief period, used Stearman biplanes which were not flown at other schools.

On the whole the British airmen were well received. Indeed, a large number married Canadian girls and after the war some returned to make their home here. Nevertheless, it must not be imagined that their stay in Canada, which averaged from eighteen months to two years for staff personnel, was a pleasant change from their war-torn homeland. On the contrary they regretted the transfer. Separation from families who every day faced the hazards and inconveniences of life in a war zone was a constant source of "worry and anxiety" for the men transported to the comparative security of Canada with all its amenities — abundance of food, bright lights, and safety from enemy air attack — which were denied to those they left behind.[22] A number of families were transferred at government expense and, after 1941, a substantial proportion of the married men were able to bring their families over, but the ruling was that accommodation must be found before dependants could be moved.

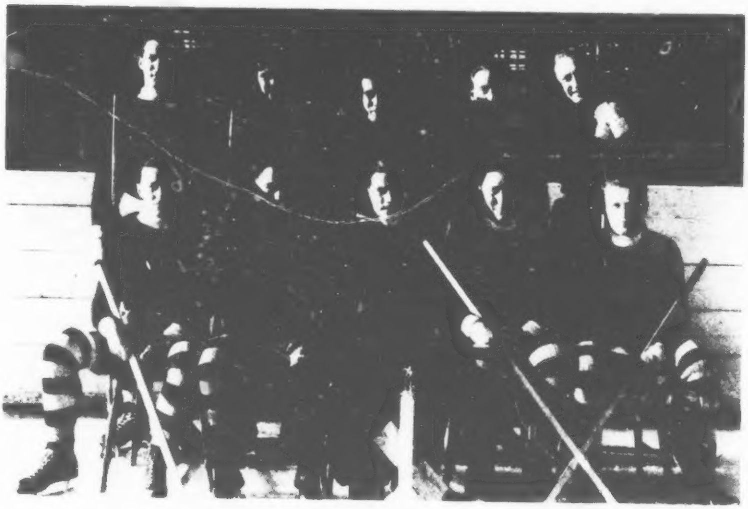
A preliminary housing survey undertaken by the RCAF in 1941 showed that accommodation in the towns and villages of western Canada was totally inadequate while home owners in larger communities, who welcomed the British individually as comrades-in-arms, were not anxious to have them as paying guests especially if children were involved. There were also complaints by the RCAF that in some cases where houses were vacant the owners "have taken, to say the least, a most unpatriotic attitude and refuse to rent."[23]

Explanations by commanding officers as to why families could not be moved did little to assuage the pent up feelings of British airmen. Typical, perhaps, was the sentiment expressed in the diary of 31 SFTS at Kingston where housing conditions were no better than elsewhere: "The retention of families in Great Britain appears to show poor psychology, and will eventually result in unrest."[24] The unrest showed up, not in overt action, but in a widespread malaise diagnosed by medical authorities as "Anxiety state — assumed or real." The symptons were vague complaints of "lack of sleep and concentration, loss of appetite, disturbing dreams, lassitude, indefinite body pains and so on."[25] The cure was simple — "posting to the U.K." This solution, of course, was out of the question except in extreme cases. Another proposal, to stifle "mass grumbling and mutual sympathy" by wholesale mixing of British and Canadian personnel was also turned down as impractical by both the RAF and RCAF. Instead, the personnel affected, whose complaints were considered inconsequential "compared to the vast difficulties besetting the Empire," were to be encouraged "to put their shoulder to the wheel" and to "submerge their personal problems"[26] which, unfortunately, some were already doing by over indulging in alcohol.[27]

To be fair, mention must be made of the well-organized programmes of sport, recreation, and vocational activities which were set up almost as soon as the schools arrived in Canada. Boxing, soccer, track and field, and cricket, were entered into with the greatest enthusiasm and provided excellent therapy for worry and discontent. In winter the RAF men tried their hands at hockey and skiing. Nearly every unit had its theatre group which sometimes reached out for local talent, particularly if women were needed in the cast. Gardening also had its appeal. These activities proved their worth as morale boosters and also fostered a friendly relationship with civilian communities. At Moose Jaw, for example, the theatrical group regularly performed to full houses in the city's Capitol Theatre and the Moose Jaw Technical High School.[28]

Yet ironically, it was in Moose Jaw, where the relationship between the school and the community was held up as a shining example, that one of the very few disturbances involving Canadian civilians and RAF personnel occurred. This was preceded by another incident which took place in July 1943. Variously described as a "strike," a "small riot," and a "mutiny"[29] the latter was confined solely to service personnel and was triggered by the loss of certain privileges such as special over-night passes and the wearing of civilian clothes when off duty. Instead of presenting their grievances through the proper chain of command about two

The Mad Hatter's Review, a fast moving musical comedy by the staff of No. 32 SFTS was given an enthusiastic reception by the people of Moose Jaw. (PMR 81-150)



Even for the British, hockey was the favourite winter sport at all air training centres. This British team, all sergeants, won the local championship at No. 34 SFTS. The game was played in the Medicine Hat arena on 17 February, 1943. (PMR 81-147) hundred airmen from the maintenance wing refused to report for duty, heckled their officers, and generally exhibited noisy and stubborn behaviour. The trouble lasted only one day. Having voiced their complaints and being told that their grievances would be reviewed (and after some arrests were made) the unruly airmen went back to work.[30]

In retrospect the incident holds interest as an illustration of how the Visiting Forces Acts applied to the RAF units in disciplinary matters. Although all those directly involved, including the Commanding Officer, were members of the RAF the serious nature of the offence placed it beyond the jurisdiction of the CO who referred it to higher authority, viz. Air Vice-Marshal G.R. Howsam of the RCAF, Officer Commanding No. 4 Training Command, of which the British school formed a part. On his recommendation Canadian Air Force Headquarters ruled that the ringleaders in the affair were to be tried by court martial while some who played a lesser part were to be transferred to other units. Further, all RAF schools, which previously had enjoyed some leeway in the matter, were ordered to adhere to RCAF regulations pertaining to leave, overnight passes, and the wearing of civilian clothes. The courts martial, however, were to be made up entirely of RAF officers and the accused tried under RAF law.*[31]

The subsequent disturbance consisted of a series of clashes between Moose Jaw youths and servicemen in September 1944 which were dealt with by local police.[32] Their origin is not clear but they were deplored by both civic and military officials as a regrettable blot on an otherwise pleasant relationship. Understandably, aircrew trainees, who were kept too busy to get into much trouble, were not involved in either fracas**. Generally, they were in Canada for only a limited time and looked forward to getting their wings and returning to the United Kingdom. Unless earmarked for a tour of instructional duty on completion of their training, they were free from the worry and discontent that plagued so many staff personnel.

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* Under the Visiting Forces Acts, as amended by Orders-in-Council of the British and Canadian governments, the findings of a court martial of this nature would be reviewed, and approved by the Judge Advocate General of the RCAF. If a severe penalty such as death or penal servitude were imposed final approval would have to be given by RAF authorities. C.P. Stacey, *Arms, Men and Governments: the War Policies of Canada, 1939-1945* (Ottawa: Queen's Printer, 1970), 303-305.

** Dr J. Pariseau, an eye-witness, describes the situation in "My BCATP Experience", MS, 1981, DHist.

Disputes between Canadian and British military authorities in all branches of the service arose from time to time and on occasion were prolonged and bitter. But in the air training organization in Canada, where British and Canadians worked closely together and sometimes rubbed each other the wrong way, instances of trouble and disagreement would be difficult to document. In view of the general discontent of British personnel with their lot on this side of the ocean, the frustration felt by young RAF pilots posted to flying jobs in Canada, and an overall air of superiority in air force matters which British officers found hard to stifle, the absence of wrangling is almost uncanny. The explanation is probably to be found in the personalities of the men at the top; in Power, whose congenial nature and sense of humour could smooth troubled waters, in Leckie, whose unassuming manner, administrative ability, and extensive service background, earned the confidence and respect of the RAF and RCAF alike, and in Air Vice-Marshal L.D.D. McKean, head of the United Kingdom Air Liaison Office, whose diplomatic approach helped to keep British and Canadian officers working together harmoniously. Privately McKean expressed the opinion that the RCAF had a lot to learn about air training organization but he felt that advice should be "tendered sparingly and delicately" and went out of his way to avoid stepping on sensitive Canadian toes.[33] Although the British liked to think of their schools as models for the RCAF to follow, they were advised by their High Commissioner in Ottawa, Malcolm MacDonald, to avoid any show of competition which might put the Canadian schools in a bad light. If this should happen, warned MacDonald, pointing to the political significance of the BCATP and sounding as if he had been prompted by Air Minister Power, "this Government will fall and the blame will rightly be attached to Great Britain."[34]

Of the schools transferred by the RAF special mention must be made of the operational training units which added an altogether new dimension to the air training in Canada. The OTU concept, a simple yet radical development in flying training, did not come into general use until after the war began. In the RAF until 1938, and in the RCAF until the outbreak of war, pilots went directly from advanced training to operational squadrons, where they had to be taught to fly operational aircraft before they were of any use to the squadron. In 1938, to remove the training burden from front-line squadrons, the RAF set aside special units whose function was to conduct training on operational aircraft and whose graduates would be passed on to fighter, bomber, and maritime air squadrons. In April 1940 these were designated as OTUs.[15]

Since the British felt that OTU's should be closely tied to the operational squadrons they were supporting, little thought was given to moving any of them to Canada at the time the BCATP agreement was negotiated. It was not until December 1940, when Air Vice-Marshal Breadner asked that they be included in the list of RAF units to be sent to Canada,[16] that the transfer of OTU's came up for consideration. The reasons behind Breadner's request are not clearly documented but looking at the problem from a Canadian point of view he no doubt felt that the presence of a few OTU's would give better balance to the air training programme and to the RCAF as a whole. Though not at first attracted to Breadner's proposal, which would involve the transfer of hundreds of experienced personnel and a significant amount of specialized equipment, Air Ministry officials, looking at the situation from a new angle, saw that Canadian-based OTU's would be strategically valuable in that they could be used to train BCATP graduates to fly operational aircraft across the North Atlantic to the United Kingdom. In this matter they appear to have been persuaded by Air Commodore John C. Slessor (later Air Chief Marshal Sir John C. Slessor) who, during a visit to Canada towards the end of 1940, became convinced that the handful of Canadian, British and American pilots presently engaged in ferrying operational aircraft to Great Britain would have to be greatly increased.[17] Consequently, in February 1941, Breadner was advised that four OTU's would be moved to Canada. "These would be equipped with aircraft produced in Canada or U.S.A. and would link up with training for ... trans-Atlantic ferrying commitments."[18]

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* In practice, individual pilots going overseas had to learn to fly operational aircrafts at an Advanced Flying Unit (AFU) before going to OTU where operational crews were assembled.

No. 31, the first to embark, moved across the North Atlantic in three echelons in May 1941 to an unfinished airfield at Debert, N.S. Overly optimistic, the Air Ministry expected training to commence in June but owing to the state of the runways and the delay in receiving spare parts and "the thousand and one other things necessary to start an O.T.U." no pupils were accepted until August.[39]

Equipped with Lockheed Hudsons, an American-built aircraft widely used in both Canada and the United Kingdom for ocean reconnaissance, the unit had two functions. One was to provide operationally-trained crews for Coastal Command of the RAF and the other was to conduct courses in trans-Atlantic flying to enable them to deliver Hudsons from Dorval airport, at Montreal, to Prestwick, Scotland which was the eastern terminus of the ocean route. The first of these latter courses, an *ad hoc* arrangement, consisted of twenty RCAF observer graduates of the BCATP. Fifteen qualified and were immediately posted to Ferry Command.[40]

Operational training proper began in December on a syllabus which provided a course of twelve weeks for pilots and wireless operator/air gunners and eight for observers. Training for each group proceeded separately until the final stages when the crews, consisting of one pilot, one observer and two wireless operator/air gunners, flew together as a crew. If judged capable of making a trans-Atlantic crossing they received an additional eight weeks of training and were then sent to Ferry Command. The others, with the exception of a few sent to home defence squadrons of the RCAF, travelled to the United Kingdom by sea.[41]

No. 36 OTU, based at Greenwood, NS used the same equipment as No. 31 and followed the same syllabus, but concentrated almost entirely on operational training and provided relatively few crews for Ferry Command.[42] The same was true for No. 34, transferred from Greenoch, Scotland to Pennfield Ridge in New Brunswick in April 1942. It flew Lockheed Venturas, a light bomber similar to the Hudson, and trained four-man crews for Bomber Command. But it was the least successful of the four transplanted OTUs, a result of serviceability problems with the Venturas, persistent fog, and a lack of operationally-trained instructors.[43] It was disbanded in April 1944.

Sending inexperienced crews across the Atlantic was regarded as something of a calculated risk. Most of the pilots working for Ferry Command, some civilian and some military, had accumulated thousands of hours in their logbooks in a lifetime devoted to flying. With few exceptions they could qualify as navigators as well as pilots and were inclined to shake their heads in disbelief at the prospect of 'kids' in their late teens and early twenties, with a maximum of 350 hours flying time to their credit, setting off across the North Atlantic without the use of external navigational aids to guide them. But the 'kids,' most of them Canadians and Britons with smaller percentages of Australians, New Zealanders, Americans and others, proved themselves. In April 1942, six first pilots and forty-six second pilots, graduates of BCATP and RAF schools, were used on the Atlantic route. According to Air Chief Marshal Sir Frederick Bowhill, commanding Ferry Command, the results were "most heartening." The pilots and crews "have done a fine job of work and all have so far completed their crossing to the United Kingdom." On the way some encountered gremlins in the form of rough weather, faulty instruments, and sputtering engines but "put up a remarkably good show."[44] Eventually, almost all the navigators in Ferry Command were BCATP graduates.

The fourth Canadian-based operational training unit, No. 32, was transported from West Kirby in Cheshire, England, to Patricia Bay on Vancouver Island. It specialized in torpedo bombing, being the main source of crews for 415 Squadron, RCAF, 144 RAF, and 455 RAAF — all serving in Coastal Command — and used a variety of aircraft: Bristol Beauforts, Handley Page Hampdens, Fairey Swordfish, and Ansons. It arrived at Patricia Bay in August 1941 but facilities at this overcrowded airfield, which already housed two home defence squadrons, were quite inadequate and training at No. 32 OTU was delayed until December. In the excitement of Pearl Harbor Air Force Headquarters then ordered the unit to cease training and re-form as an operational squadron for west coast defence — another example of the authority conferred on the RCAF by the Visiting Forces Acts. By 29 December, when training resumed, the instructional staff had carried out about thirty-five operational sorties.[45]

Compared to the service flying training schools and other transferred units which fitted easily enough into the training structure in Canada, the OTUs were severely frustrated in getting themselves re-established. In the first place none of the newly-constructed airfields were designed for OTUs which, because of their heavier aircraft, required longer runways, larger working areas, and more buildings than other types of training units. A very limited number of combat experienced instructors were available and some equipment deemed essential for operational training, including VHF (very high frequency) communication systems and beam approach landing systems, could not be obtained in Canada. Contemporary knowledge of operational tactics, even up-to-date information on operational training was almost totally lacking and the OTUs, manned at first entirely by RAF personnel, had to work out their problems with very little guidance from above.[46]

Because of these handicaps the Air Ministry never expected too much from its Canadian-based OTUs and accepted that the graduates would have to be retrained, in whole or in part, in British OTUs on arriving in the United Kingdom. The training given in Canada depended, of course, on the type of OTU but in general it consisted of conversion training, during which pilots became familiar with the operational aircraft, navigation exercises, cross-country flights by day and by night, bombing, and reconnaissance patrols. Some of this would be repeated again in the United Kingdom if the crews were not up to the required standard but they were more likely to concentrate on communications procedures, beam approach, searchlight co-operation, air firing, and special aids to navigation such as "Gee" and "Oboe" at the British OTU.[47]

As Breadner no doubt foresaw when he originally requested the transfer of the British OTUs, their relocation in Canada provided a valuable learning experience for the RCAF. Canadians were gradually added to the staffs of these units and when three additional OTUs were formed under the BCATP (No. 1, a fighter OTU at Bagotville, Que. in July 1942, No. 3, which trained flying boat crews at Patricia Bay, in November, and No. 5, a heavy bomber unit at Boundary Bay, BC in April 1944) the RCAF was able to provide some of the expertise. It eventually was able to supply all the staff for these units and in 1944 also took over three of the British OTUs — No. 31, 32, and 36. The OTUs were among the last units of the BCATP to be disbanded. It is interesting to note that Greenwood was retained as an operational training base and is still used for that purpose by the Canadian Armed Forces.

From 31 July 1942 to 31 March 1945 twelve thousand graduates passed through the Canadian OTUs, and before that, although the statistics are not so reliable, another thousand or more had been put through the four RAF units.[48] Thus roughly one tenth of the 131,553 graduates of the BCATP received some operational training in Canada. The majority, and this would include nearly all those posted to Bomber Command, were operationally trained in the United Kingdom.

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Americans and the BCATP

On 26 September 1940 a group of American officers returning from a visit to the United Kingdom reported that they had been told the output of pilots by the BCATP was behind schedule and that the plan itself was a failure. One of the first Canadians to learn of this report was C.D. Howe, who happened to be in Washington just as the story broke and American officials, including Secretary of the Treasury Henry Morgenthau, were asking themselves if there was any point in sending more aircraft to Canada or the United Kingdom. To kill the rumour Howe immediately issued a press release, through the British Purchasing Commission in New York, showing the BCATP to be well ahead of schedule in the number of airfields opened and the number of aircrew trained. The main difficulty, he pointed out, was the shortage of aircraft but this was gradually being overcome by purchases in the United States and new production in Canada.[1]

Apart from this incident, which thanks to Howe's quick action came to nothing, there was little to criticize in the official American attitude to the BCATP. Co-operation was enthusiastic and effective: the American government was probably better informed on the training plan than on any other part of Canada's war effort and the President himself was keenly aware of its importance in allied strategy as evidenced by his reference to Canada as "the Airdrome of Democracy."[2]

Nevertheless, notwithstanding American readiness to co-operate — even, indeed, because of it — Canada soon found herself in an economic bind over the BCATP. This was not unexpected. During the negotiation of the agreement in 1939 Mackenzie King had been greatly concerned that, as administrator of the plan, Canada would be required to make large expenditures in the United States which would worsen its already unfavourable balance of payments with its neighbour. It was mainly to cover this deficit that Canada had driven a hard bargain with the United Kingdom at the negotiation table.

Canada's balance of payments with the United States deteriorated sharply after the fall of France. To ensure the success of the BCATP the Canadian government was required to make heavy cash outlays in the United States for equipment that was no longer available from Great Britain. Aircraft and aircraft engines made up the bulk of the purchases. The orders included Cessna Cranes, Jacobs L6MB engines for Ansons to be built in Canada, more Jacobs engines and also Wright R975 engines for Anson airframes shipped from the United Kingdom, and Menasco Pirate engines to cover a temporary shortage of British Gipsy Major engines for Tiger Moths. In addition there were miscellaneous items such as aircraft instruments, radio equipment, and Browning guns. These orders were supplementary to Canada's financial obligation under the BCATP agreement. A large part of the expenditure was recoverable from the United Kingdom but this part of the transaction remained a bookkeeping entry. Added to purchase of other war material from the United States the net result was a heavy drain on Canada's dollar reserves.

But if Canada was hard pressed the United Kingdom was on the edge of bankruptcy, largely because of its purchase of thousands of operational aircraft in the United States. Britain was also piling up a huge indebtedness in Canada on account of the BCATP. Although an arms embargo, as provided for in American neutrality legislation, went into effect when war broke out, Roosevelt succeeded in having it lifted in November. Britain was then able to buy war material in the United States but had to pay cash and carry its purchases away in its own ships. War credits were not permitted. How, then, would aircraft and other military supplies be kept moving across the Atlantic when Britain ran out of cash? The answer given by Roosevelt and his advisers was that "we ourselves had to find means to pay for them."[3] A Lend-Lease Act passed on 11 March 1941 was the result, dramatically ending the need of the United Kingdom and other allied nations to pay cash for war purchases in the United States.

Because of its close relationship with the United States, however, Canada could not accept lend-lease without jeopardizing its national sovereignty to a politically unacceptable degree. The problem was side-stepped through the Hyde Park Declaration, announced jointly by the Canadian Prime Minister and the President of the United States on 20 April 1941.[4] Its general purpose was to promote economic collaboration between the two countries in the realm of defence and to provide additional assistance to the United Kingdom in doing so. Through its provisions American goods and materials imported by Canada but intended ultimately for use by Great Britain could be brought across the border under the Lend-Lease Act. This interlocking of American lend-lease and Canadian aid to the United Kingdom considerably eased Canada's balance of payments, without threatening her sovereignty, and was of crucial importance to the BCATP.[5] On the Canadian side the Department of Munitions and Supply set up a new Crown Company, War Supplies Limited, under the direction of E.P. Taylor, to negotiate contracts with the United States for war supplies to be manufactured for Canada. Through this body the American War Department placed its first order for Harvards to be built for the BCATP under lend-lease. Other orders for Harvards and Fairchild Cornells, monoplane elementary trainers, followed in 1942.[6] Petroleum imports, in so far as Britain's obligation to supply them extended, were also accounted for under the Lend-Lease Act. By the end of the war the total value of lend-lease items furnished for the BCATP amounted to $283,500,363, approximately one tenth of the total cost of the plan.[7]

American interest in the BCATP was visibly displayed in the number of young Americans who joined the RCAF in 1940 and 1941, a contribution which presented some delicate diplomatic problems. There were no restrictions in regard to recruiting citizens of the United States who lived in Canada, but recruiting of American nationals on American soil to fight in foreign wars was a violation of the Neutrality Act. The RCAF had to move warily in dealing with offers of service which began reaching Air Force Headquarters in September 1939. No information was supplied to the applicants but they were advised that they could find out about conditions of service in the RCAF by visiting the nearest Canadian recruiting centre. Those who followed this suggestion were interviewed, medically examined, and had their applications placed on file. If found suitable they were contacted by letter and informed that if they wished to return to Canada to renew their application "the Department might now be in a position to give consideration to such an application."[8]

Another reason why Americans were given little encouragement in the early months of the war was that the RCAF was swamped with applications from Canadians. However, in his report to the Supervisory Board on 6 May 1940, Air Vice-Marshal Croil emphasized that the BCATP was now facing a serious shortage of trained pilots. They were needed principally at the bombing and gunnery schools. Each of these schools had an establishment for about forty-five staff pilots, "air chauffeurs" as Croil called them to fly wireless operator/air gunners, air gunners, and air observers, on training exercises. The principal aircraft used were Westland Lysanders for target towing, Fairey Battles and Bristol Bolingbrokes for gunnery practice, and Avro Ansons for bombing. Ansons and Bolingbrokes required pilots qualified on twin-engined aircraft, who were in particularly short supply. All available pilots in Canada had already been absorbed and Croil felt "that the shortage can best be overcome by the entry into the RCAF of trained pilots from the United States, many of whom have offered their services."[9]

Recruiting of Americans was entrusted to a semi-secret organization known as the Clayton Knight Committee. It took its name after its chief organizer but owed its origin to Air Marshal W.A. Bishop, the famous Canadian fighter ace of the First World War. Recalling that a substantial number of Americans had come to Canada in 1917 to join the Royal Flying Corps, Bishop believed that history would repeat itself but on a much larger scale and saw the need for an organization to select and screen the American volunteers and funnel them across the border.

On 4 September, the day after Britain declared war, Bishop confided his thoughts to Clayton Knight, an American friend in New York.[10] Knight, too, had flown on the Western Front in the First World War, and although wearing an American uniform he had served with a British squadron, No. 206, an experience which Bishop knew had left him sympathetic to the allied cause. Moreover, because of his many contacts with the American aviation fraternity (which stemmed from his reputation as the United States' foremost aviation artist) he would be invaluable to the scheme which the Canadian had in mind.[11] In taking this initiative Bishop, who was on the reserve list of officers appears to have been acting on his own, but with the approval of the Minister of National

Defence and, presumably, of the RCAF. Later on he was placed on the General List of the RCAF but served more or less as a free agent until January 1940 when he was appointed Director of Recruiting. In this capacity he injected "colour, drama and excitement into the quest for air force volunteers. He believed in bands, parades and lots of publicity."[12] He was present at a countless number of graduation parades and newly trained pilots considered it a distinctive honour to have their wings pinned on by him.

Surprised by Bishop's phone call, which reached him in Cleveland, Ohio, where he was attending the Cleveland air races, Knight agreed to do what he could and began at once to sound out his friends. Some gave him a kindly warning about the illegality of the enterprise but the enthusiasm shown by younger pilots demanded a more extensive survey.[13]

When Knight asked for the assistance of an experienced administrator, Bishop singled out another acquaintance, Homer Smith, a Canadian pilot of the First World War who had inherited a family fortune founded on oil and who for some years had been living in New York and Palm Beach.[14] He was sworn into the RCAF in the rank of wing commander, after which he and Knight toured the United States by air. They met with "encouraging responses in Hollywood, San Diego, San Francisco, Oklahoma City, Dallas, San Antonio, New Orleans and Kansas City, and were given lists of pilots who had already expressed a willingness to volunteer."[15]

The RCAF hesitated to launch a recruiting programme in the United States during an election year but the critical war situation in the spring of 1940, the need to expand the BCATP as quickly as possible, and the shortage of twin-engine pilots in Canada made the decision inevitable. Knight and Smith were called to Ottawa, briefed on the manpower needs of the RCAF, and instructed to develop an organization to locate American pilots and route them to Canada.[16] Thus the Clayton Knight Committee was officially called into being.

Before any action was taken the Canadian Minister to the United States, Loring C. Christie, was asked about the probable reaction of the American government. He reported that there appeared to be no problem and conveyed a message to the Prime

Minister from the "highest quarter" informing him that "United States authorities will not be embarrassed by the enlistment in Canada of United States citizens who proceed to Canada for such purposes." It was asked, however, that they not be required to swear the Oath of Allegiance to the head of state which would entail the forfeiture of American citizenship.[17] This presented no great obstacle and by Order-in-Council (P.C. 2399, 7 June 1940) the Canadian government ruled that foreign nationals enlisted in the Canadian armed forces need not swear allegiance to His Majesty the King.

Homer Smith, who was opposed to the idea that the Committee try to conceal itself in a "hole-in-the-wall," boldly decided to set up headquarters in the prestigious Waldorf Astoria Hotel in New York, where he was well known and where his presence would not arouse suspicion.[18] Other offices were opened in Spokane, San Francisco, Los Angeles, Dallas, Kansas City, Cleveland, Atlanta, Memphis, and San Antonio, all in luxurious hotels with a suite of rooms, a manager, and office staff of six or seven. Expenses were met by drawing on a revolving bank account which the RCAF had opened in Smith's name.[19]

While Smith was organizing the mechanics of administration, Knight conferred with General H.H. Arnold, Chief of the Army Air Corps and Admiral J.H. Towers, Chief of the Naval Bureau of Aeronutics, "both of whom I had known for many years," and also saw representatives of the major airlines to ensure their co-operation and avoid competition in pilot recruiting.[20] Feeling that it would be wise to give the State Department "some inkling of our intentions" he contacted a State Department official who declined to comment on the proposed recruiting operation but "icily and correctly" quoted from the Neutrality Act that anyone convicted of "Hiring or retaining another person to enlist in the services of a belligerent ... shall be fined not more than $2,000 and imprisoned not more than three years."[21]

By September 1940, 187 civilian pilots, (including 44 destined for Ferry Command of the RAF) had been sent to Canada and applications from hundreds more were on file.[22] The applicants were first screened by a commercial agency to weed out any 'escapists' with bad debts or bad work records. They were then given a medical examination, a flying test, and a final interview by Knight or Smith, or some other representative of the Committee. Their way was paid to Canada where more exhaustive tests awaited, and until they were accepted or rejected they were entitled to a living allowance of five dollars a day.[23] In Canada a number of opportunities were open to the Americans. For those who wished to maintain their non-military status there were jobs as civilian flying instructors at elementary flying school or civilian staff pilots at air observer schools. Most of the Americans, however, preferred to don the air force blue and became flying instructors at service flying schools or staff pilots at bombing and gunnery schools. Pilots with airline experience were offered lucrative contracts with Ferry Command of the RAF flying bombers across the Atlantic.

In November 1940, after a warning note from the American State Department to the effect that the Clayton Knight Committee was openly soliciting pilots and becoming an embarrassment to the United States, the Canadian government seriously considered disbanding the organization. A Cabinet decision to do this had, in fact, been taken but on the advice of the Deputy Air Minister, J.S. Duncan, who argued that a continued flow of American pilots was essential to the expansion of the BCATP, the matter was given second thought.[24] Further probing of the problem by O.D. Skelton, Under Secretary of State for External Affairs, revealed that the State Department had acted independently of the White House and the situation was not as serious as King and his ministers had been led to believe. Yet there were complaints. In a subsequent briefing to M.M. Mahoney, the Senior Canadian Consul General at Washington, State Department officials cited two matters that were particularly disturbing: the use of Canadian public funds to spirit Americans to Canada to serve in the RCAF and the direct soliciting of pilots by letter and other means — both violations of American law. To add to the chagrin of the State Department, the work of the Clayton Knight Committee was reported fairly widely, and not unfavourably, in the American press.[25]

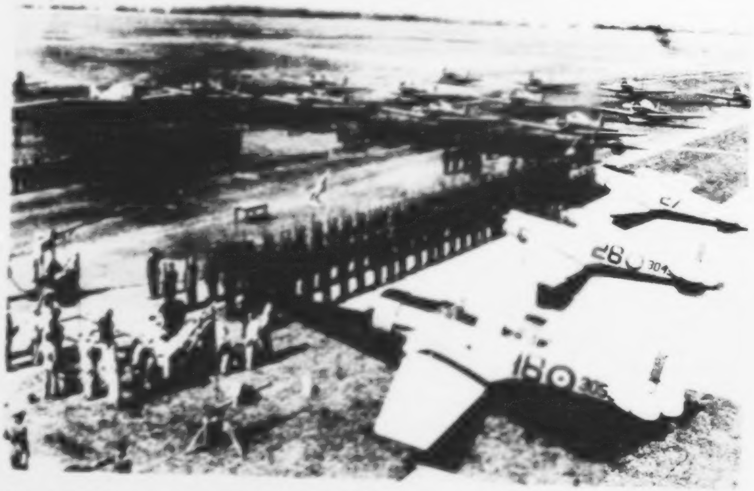
While not going so far as to recommend that the Committee be disbanded, the State Department protested that Knight and Smith had been "damn careless" and "should slow down and pull in their horns." Trying to be helpful, it suggested that they add a legal adviser to their staff — "one who would be able to stretch the law a little." Although there was no thought of investigating the Committee it might be wise to get rid of some of its files — just in case. Although State Department officials received many complaints from isolationists and anti-British elements about the questionable doings of Knight and Smith these were usually given "a good meaningless bureaucratic answer." There was no reason to believe that this practice would not be continued.[26]

In response to the concern of the State Department the Canadian government modified the recruiting procedure in January 1941 introducing a Crown Corporation, the Dominion Aeronautical Association, as a buffer link between the RCAF and the Clayton Knight Committee.[27] Correspondence with the Committee was thereafter handled by this body and the fiction was created that Smith and Knight were agents, not for the RCAF, but for the Dominion Aeronautical Association. When American recruits, following their instructions, reported to the office of the Dominion Aeronautical Association in Ottawa they were told, "we really haven't anything for you right now but maybe the RCAF have." Air Force Headquarters was next door.[28]

Air Force records show that up to the end of 1940, 242 American pilots channelled through the Clayton Knight Committee were serving with the RCAF as "air chauffeurs" at bombing and gunnery schools or instructors at service flying schools. As recruiting agent for the RAF, a responsibility it assumed in September 1940, the Committee directed eighty-four pilots to the United Kingdom Air Liaison Mission in Ottawa for Ferry Command. An unknown number of Americans had also been hired by the elementary schools as civilian flying instructors and by the air observer schools as civilian staff pilots.[29]

Because it had an abundant supply of Canadian recruits and also because it was reluctant to become too dependent on American manpower the RCAF shied away from using the Clayton Knight Committee to recruit untrained candidates for operational aircrew training. But in the spring of 1941 signs of a Canadian manpower shortage began to appear and led the Air Council, after some very serious discussion, to ask the Committee to select 2,500 raw recruits for the RCAF.[30] Doubts about the political consequences of such a campaign were removed after Roosevelt in declaring an unlimited national emergency, said that American

A proud moment. An American pilot graduate receives his wings from the most famous Canadian fighter ace of the First World War — Air Marshal W.A. "Billy" Bishop, VC, CB, DSO, MC, DFC, ED. (PL 9628)



No. 2 SFTS, Ottawa, 16 July, 1941. The presentation of pilots' badges to Course 29 by Air Marshal Bishop was filmed for the Warner Brothers' production "Captain of the Clouds" starring James Cagney. Training, except for early morning flying, was disrupted for two weeks by the movie makers but RCAF authorities apparently felt that the publicity was worth it. (PL 5021)

pilots were at liberty to accept employment in Canada and to volunteer for combat service with the Allies. Introducing what seemed to be a new form of lend-lease the President hinted that these pilots would be returned to the United States if need arose.[31]

Notwithstanding the President's statement it was still necessary for the Clayton Knight Committee to avoid running afoul of the FBI or the State Department or stirring up criticism from the large isolationist segment. To be on safer ground in launching the new recruiting drive the Committee was renamed the Canadian Aviation Bureau and the term "RCAF" was carefully dropped from all correspondence and replaced by "Canadian Aviation." Smith was instructed to proceed slowly, to be selective in choosing candidates and to work to a schedule of regular monthly quotas laid down by the RCAF.[32]

These instructions proved futile. It was next to impossible for the Canadian Aviation Bureau to stick to quotas for many of the applicants were not willing to wait. If told that they could not qualify because of age or some other reason this advice was often thrown to the wind and fired by the impatience of youth they headed for the border and the nearest recruiting office. Smith had been asked not to accept any Americans under twenty-one years of age unless they had their parents' consent but wilful teenagers simply by-passed the Canadian Aviation Bureau and made their own way to Canada. Some had little or no money and if not taken into the RCAF immediately might become a public charge and a possible source of political controversy. Some distraught parents pursued their offspring across the border pleading with them, sometimes successfully and sometimes not, to forget about foreign wars. Other parents took their problems to Members of Congress. This procedure resulted in a few complaints reaching the Canadian Minister in Washington but there were no serious repercussions.[33]

On 8 December 1941 the United States declared war. The activities of the Canadian Aviation Bureau were then suspended and recruiting of Americans for the RCAF was officially terminated in January though the Bureau continued in existence until August 1942.[34] During the period of active recruiting in the United States, from June 1940 to January 1942, at least nine hundred trained pilots and twelve hundred untrained aircrew trainees entered the RCAF through the pipelines of the Clayton Knight Committee and the Canadian Aviation Bureau.[35] As of 8 December, however, the total number of Americans in the RCAF was calculated at no less than 6,129 the balance being made up of Americans who paid their own way to Canada, some after having first contacted the Clayton Knight Committee, and American citizens living in Canada. Just over one half of the Americans, 3,883, were in the training stream at the time of Pearl Harbor and accounted for roughly ten per cent of the RCAF aircrew intake. Overseas, 667 American members of the RCAF were flying on air operations. American ground tradesmen in the RCAF totalled 668.[36]

Within a month of Pearl Harbor negotiations were under way for the voluntary repatriation of American members of the RCAF, the Canadian Army, and the Royal Canadian Navy. In May and June a board of Canadian and American officers travelling together across Canada by special train and working with great dispatch, effected the release of 1,759 American members of the RCAF and their sumultaneous enrolment in the armed forces of their own country.*[37] In a letter expressing gratitude for the services rendered to Canada Air Minister Power concluded:

> It is, with sincere regret, but pride in the part that they played, that we part with the Americans who fitted into our organization and formed such a formidable team with our own Canadian airmen.[38]

The United States Army Air Corps benefitted immeasurably from the return of this "formidable team." All the men who returned were more skilled and experienced than when they had left the United States. Flying instructors, for instance, had had the benefit of a course at the RCAF Flying Instructors' School and a year or more of practical experience. Other pilots had logged hundreds of hours in the air, while raw recruits, who had left home with little or no flying training, returned as fully qualified aircrew.* The Americans had helped significantly in getting the BCATP through the first two difficult years when the shortage of flying instructors and staff pilots was a critical factor. In the first six months of 1942, however, the plan was turning out an average of 150 trained aircrew a month, about one third of them pilots, and the vacuum left by the departing Americans was quickly filled. After Pearl Harbor the RCAF continued to receive applications from residents of the United States who had taken the trouble to clear their applications with the American draft board. The question of accepting them was reviewed from time to time but never acted on even in 1943 when the Canadian manpower situation became critical.[39]

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* Releases continued to be authorized from time to time. By the end of the war 3,797 Americans were transferred. Dick to Air Historian, 17 May 1956, "Recruiting in the United States of America," DHist 74/7, III, app "D".

Further evidence of Roosevelt's interest in providing air training facilities for the Commonwealth was his support for a scheme to train British pilots in the United States. To the British this assistance was supplementary to the BCATP though it had only an indirect bearing on training in Canada. The Air Ministry began to think in terms of training pilots in the United States in the spring of 1940 when it appeared that the dislocation in the supply of British aircraft might seriously curtail aircrew training in Canada. Before any steps were taken Canada was brought into the picture and was told that what was about to be proposed was not in any way a substitute for the BCATP and would not cast it in an unfavourable light. The Canadian Minister in Washington was instructed to join with the British Ambassador in making a joint approach to the American government.[40]

Nothing came of this request which no doubt gave some satisfaction to the Canadian government. Roosevelt, although he had already extended aid to the Commonwealth war effort in various ways, had no desire to have Canadian and British airmen training on American soil during an election year. Nor did the British get any encouragement from the United States Army Air Corps which felt it needed all available training space for its own programme of expansion. Consequently, the proposal was turned back with an entreaty that Canadian and British authorities "would not choose to press this particular request."[41]

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* Those who had won their pilot's wings in Canada were entitled to wear them on joining the USAAF. In the years after the war RCAF pilot badges were to be seen on a number of high ranking air force officers in the Pentagon.

The Canadians accepted this answer as final but the British, in spite of assurances from Mackenzie King that the BCATP could be expanded to meet additional training requirements, kept plugging the idea. In January 1941 J.L. Ralston, the Canadian Minister of National Defence, during a visit to the United Kingdom, found the Air Ministry still intent on using ready-made American facilities. He was told that this must not be misconstrued as a reflection on "the energy, efficiency and success with which the Joint Air Training Plan has been carried through" but was needed as a reinforcement to the schools developed "by our cooperative efforts within the Commonwealth."[42] The British also saw political advantages in training aircrew in American schools for "it will strengthen the ties of friendship and goodwill which exist between the United States and the British Commonwealth."[43]

After Lend-Lease the British plans matured quickly. Acting on orders from Roosevelt, General H.H. Arnold, Commanding the USAAC or the Army Air Forces as it became known in June 1941, offered to place one third of the capacity of his Air Training Command at the disposal of the RAF. This amounted to the equivalent of fifteen elementary flying training schools and seven and one half service flying training schools of the BCATP. The first British intake arrived in June and trained alongside of American recruits. In the same month another programme was initiated by civilian-operated flying training schools. Eventually, six schools, known as British Flying Training Schools (BFTS), were made available to the RAF each having a capacity for two hundred pupils.* The schools provided the instructional staff, the USAAF looked after housekeeping and the RAF controlled the syllabus which covered elementary and advanced flying. Recruits were funnelled in through the Clayton Knight Committee.

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* They were located as follows:

No. 1 BFTS — Terrell, Texas
No. 2 — Lancaster, California
No. 3 — Miami, Oklahoma
No. 4 — Mesa, Arizona
No. 5 — Clewiston, Florida
No. 6 — Ponca City, Oklahoma.

Clayton Knight Papers, DHist 80/68, file 44

Three other training schemes were inaugurated in 1941. One of these provided refresher training at three civilian schools for American pilots recruited by the Clayton Knight Committee for the RAF. Most of the graduates went to the Eagle squadrons, three squadrons of the RAF, No. 71, 121, and 133 made up of American pilots. Another scheme, known as the Towers' scheme was the result of an offer by Rear Admiral John H. Towers of the United States Navy to train British crews for the Fleet Air Arm. It included observers and wireless operator-air gunners as well as pilots. Arrangements were also made for British observers to enrol in courses conducted by Pan American Airways for the Army Air Force. Under these various schemes about 5,000 British aircrew were training in the United States at any one time. The combined output was 12,561.[44]

After Pearl Harbor some of this training was shifted from American schools to the BCATP but the opportunity of drawing recruits from among British subjects living in the United States provided a good argument for disturbing the situation as little as possible. Three of the civilian schools were turned over immediately to the Army Air Force but no other major changes were made until the beginning of 1943 when the RAF gave up its training space in the USAAF, but it continued sending pilots to the civilian schools until the end of the war.[45]

When the news that large numbers of RAF pilots were being trained in the United States reached Canada questions as to the effect on the BCATP were raised in the Canadian press and then in the House of Commons — as Mackenzie King knew they would be. But the political situation had been nicely taken care of and in answer to the questions the Prime Minister proceeded to read a letter "which I have received from the high commissioner of the United Kingdom in reference to the matter:"

> The United Kingdom Government are grateful for the Canadian Government's cooperation in the consultations on the subject which have proceeded between the two Governments since, and are glad that there is agreement that the proposal offers advantages that we should unhesitatingly accept. The United Kingdom Government wishes to report at the same time that plans will in no way reduce the scope of the Joint Air Training Plan in Canada, which, together with those other measures of assistance in the field of air training as generously afforded by the Canadian Government, are being developed much beyond the maximum degree originally planned and at a

> pace which is far ahead of the original schedule. This constitutes a remarkable achievement by the Canadian authorities who are mainly responsible for this scheme, which will, we believe, be one of the most weighty and decisive factors in gaining victory for our arms.[46]

The interest shown by the United States in the air training problems of the Commonwealth countries by offering the use of its own facilities and helping the Canadians to expand theirs gave a much needed fillip to their determination to overcome the enemy's lead in air power. That the Americans saw their way to do this while struggling to overcome their own weakness in the air, which to them was a more urgent problem, was commendable. One of the reasons why Canada was chosen as the centre of Commonwealth air training was its ready access to the industrial resources of the United States and the full importance of this asset came sharply into focus in the troubled summer of 1940. The future of the BCATP, on which the British counted so heavily as a first step towards ultimate air supremacy, then hung in the balance but Canada was able to call on the American aviation industry, American manpower, an unexpected bonus, and American goodwill to bring it into operation in record time.

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6

A New Air Agreement — 1942

The year 1942 saw some profound changes in the BCATP. Under a new agreement signed in June the termination date was extended from March 1943 to March 1945. The RAF schools, including the operational training units were officially incorporated as part of the plan, a few more flying training units were added and some of the existing ones enlarged. The emphasis on air training swung from quantity, stressed in the first year of the plan, to quality. Yet quantity remained an important factor. The output of aircrew for 1942 was 27,778, almost double that for 1941, 14,182. In December 1942 the monthly output, the greatest to date, rose to 4,332.[1]

Early in 1942 the Canadian government had begun to press the British for a conference to renegotiate the BCATP. The training scheme had far outgrown the terms of the old agreement. Canada's responsibilities, financial and otherwise had increased enormously. Moreover, under the 1939 agreement the Plan was due to expire on 31 March 1943 and Canada was anxious to know what the United Kingdom intended after that date. Although the British were reluctant to rush into a new settlement, preferring instead to make *ad hoc* arrangements as the need arose, they gave in to Canadian urging and in March plans for a conference in Ottawa began to take shape.[2] The Canadians further proposed that the Americans, whose representatives on the Canadian-United States Permanent Joint Board on Defence had expressed interest in a meeting with Canada and Great Britain to discuss the co-ordination of air training programmes, should be invited to participate in the forthcoming conference.[3] Such a meeting, it was suggested, "offered an opportunity for consideration of the wider problem of British Commonwealth — United States air training as a whole...."[4] To this the British agreed but, desiring to keep the BCATP discussions a separate family affair, they argued for the conference being held in two parts, a general conference on air training problems to be followed by a separate meeting of the four Commonwealth partners.[5]

The climax in the pre-conference negotiations came on 15 April when Mackenzie King was in Washington. During an after-dinner conversation with Roosevelt he informed his host that negotiations to renew the BCATP were soon to take place in Ottawa and pointed out that this would be a suitable time to include the United States in a discussion on air training programmes:

> The President at once said he thought that was a good idea, and I then suggested possibly South Africa in addition to Australia and New Zealand. The President then spoke of ... Norway, the Netherlands and China ... and said he would take up the matter in the morning.[6]

The next day, after the Canadian Legation had sent an explanatory message to the United Kingdom and the President had cleared the question with his military chiefs, the two leaders issued a joint communique to the press:

> The Prime Minister of Canada and the President announce that at the invitation of the Prime Minister, a conference in which all of the United Nations with air training programmes will be invited to participate will be held in Ottawa early in May

The escalation of the conference into what was virtually a meeting of the allied nations caught Canadian and British officials by surprise. In relaying the text of the communique to Ottawa, Leighton McCarthy, the Canadian Minister in Washington questioned the wisdom of hosting such a large conference which was to include "China, Norway, the Netherlands and several others ... already at war with the Axis" but felt it was too late to make any changes.[8] The British were more strongly opposed. They particularly objected to secret and confidential information on matters such as aircraft production, aircrew output, and manpower resources being discussed at a large mixed gathering of nations even though all were allies.[9] Eventually it was agreed that a general conference on air training would be followed by a private meeting of the Commonwealth partners to consider matters relating only to the BCATP.

The first conference opened on 19 May. Partly for security reasons and partly because most of their problems lay beyond the jurisdiction of the conference, the delegates from Belgium, China, Czechoslovakia, Free France, Greece, Holland, Norway, Poland, and Yugoslavia, all trying to build up their air forces in exile, were able to play but a limited role in the proceedings. Training facilities had been made available to them in the United Kingdom, the United States, and Canada; their immediate concern was to find recruits from among their own nationals who had escaped to these countries or who had been living there since before the war. All except China had squadrons flying with the RAF and while the importance of keeping these up to strength was generally acknowledged it was a problem about which their allies could do little more than offer sympathy.[10]

The working committees of the conference provided a forum for the discussion of basic air training problems including the training of flying instructors, instrument training, operational training, the composition of aircrews, and manpower ressources. The meetings focussed on pilot training but considerable attention was given to other aircrew categories and to technical training. Discussions revealed that the methods of flying training in the BCATP and the United States Army Air Forces "were remarkably in agreement," differing only in dètail. In the BCATP, however, flying instruction was centralized and standardized through the Central Flying School at Trenton, whereas in the USAAF individual schools were given more freedom, not so much in what they taught but how they taught it. The Americans admitted the weakness in this system and explained that they were now working towards a more standardized approach.[11] The USAAF, on the other hand, appeared to give more emphasis to practice bombing, their bombardiers dropping two hundred bombs in training compared to only ninety-six for air bombers in the BCATP.

The establishment of some degree of co-ordination between the BCATP and the air training programme of the USAAF was approached rather timidly as the Americans, who had pushed the idea originally, now showed little enthusiasm for it. Nevertheless they agreed in principle to the following resolution, put forth by Air Marshal G.O. Johnson, deputy Chief of Staff of the RCAF.

> That there shall be a committee to be known as the Combined Committee on Air Training in North America to consist of representatives of the United

States, the United Kingdom and Canada. A United States representative will be the Chairman of the Committee.[12]

This was the most lasting achievement of the first part of the conference but it was not to bear fruit for some time. The Americans, who agreed to take the initial steps in setting up the committee, conveniently forgot about it, apparently fearing that the British, who dominated the conference,* would dominate the committee as well, leaving the USAAF with less freedom of action than it wanted.[13] Nothing was done for almost a year. Finally, after much prodding from the Canadians, a meeting was called for 26-27 April 1943.[14] Thereafter the committee met every two months, alternating between the United States and Canada, the second meeting being held at Trenton under the chairmanship of Air Vice-Marshal Leckie. Its achievements during the war were in no way spectacular but, according to Air Vice-Marshal McKean who attended as representative of the RAF, "it provided a link of the greatest value" and led to "the development of air training on ... approximately a common basis."[15] The committee was to remain in existence after the war, providing a channel for the discussion of air training problems between the RCAF and USAAF.

The second part of the conference, restricted to representatives of the United Kingdom, Canada, Australia, and New Zealand, began on the same day that the first part came to an end. The meetings of the Commonwealth partners were on a more practical level than those of the preceding general session and the results were more decisive and easier to assess for they were directly related to the conduct of the war. The mood of the conference reflected satisfaction with the BCATP or at least with many aspects of it. Bickering and hard bargaining, so conspicuous at the conference in Ottawa two and a half years earlier, were non-existent. The claim that the BCATP was nothing more than "a scheme for training men for the British Air Force," so rudely hurled at the British by the Canadians in October 1939, would have been completely out of place in May 1942. The statement itself was still largely true but with the passing of time Canadians were thinking of the

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* The British delegation included 26 members, the American 18, and the Canadian 16. The other delegations were quite small some consisting of only one or two representatives.

BCATP more and more as their own plan. It had added considerably to Canada's stature and to the prestige and confidence of the RCAF which found a great challenge in the importance of its ever-widening dimensions.

Some items of business were easily disposed of. Without hesitation the British agreed to the amalgamation of the RAF units with the original schools (sometimes referred to incorrectly but conveniently as RCAF schools) in a combined organization still known as the BCATP. This arrangement simplified the problems of administration, for the RCAF could now make decisions regarding the supply of aircraft and equipment without consulting the United Kingdom Air Liaison Mission at every step of the way. Although the RCAF henceforth had a free hand in dealing with the British schools within the limits imposed by the Visiting Forces Acts, it was also obligated to preserve their national identity.

For purposes of financial reckoning 30 June 1942 was taken as the termination date of the old agreement. Calculations by the Committee on Finance, under the direction of H.G. Norman, financial adviser for the BCATP, placed the overall cost of the second phase (from 1 July 1942 to 31 March 1945) at $1,446,310,000.[16] The United Kingdom assumed liabilities amounting to "seven hundred and twenty-three million dollars Canadian ... less payments received by ... Canada from ... Australia and New Zealand." But since the British Treasury had to guarantee these payments Britain was, in fact, accepting responsibility for one half of the cost of the new plan. As in the old agreement Britain's share was to be paid in kind in so far as possible and material obtained through the Lend-Lease agreement with the Americans could go towards liquidating it. Any balance owing at the end of war on the first phase of the plan as well as the second, was to be paid in Canadian dollars.

That there would be a balance and a very large one was not in doubt, for the British were piling up a huge indebtedness on account of air training. This did not enter into the discussion since ways to liquidate British debts to Canada were still being explored. But Air Minister Power, who felt that quibbling over British and Canadian expenditures on air training, and trying to keep the one separate from the other, was an exercise in futility, remarked in the House of Commons just before the conference:

> Personally I think we should call the accounts all square, say that we have spent here so much, and that they have spent there so much and let it go at that .... but of course that is unorthodox finance.

In the end, however, that is more or less the way in which the accounts were to be settled.[17]

Manpower commitments to the BCATP were also arranged equitably enough. The United Kingdom accepted responsibility to fill "not less than 40 per cent of the training capacity of the combined training organization." Australia was allotted space for 1,300 pilots, 676 observers and 936 wireless operator/air gunners each year, while New Zealand's contribution was set at 450 pilots, 676 observers, and 715 wireless operator/air gunners. In total, the two Southern Dominions were to provide 4,753 trainees each year. Canada's quota, which was not written into the agreement, was 34,600, or approximately half of the plan's estimated annual intake of 68,419.[18] Some concern as to Canada's ability to meet this obligation was expressed by Air Commodore E.E. Middleton, Acting Air Member for Personnel of the RCAF. Middleton reported to the Committee on Manpower that Canada's quota of pupils for the next few months was already enlisted but there were indications that the reserve of eligible aircrew would be exhausted early in 1943. After that, to keep the flow of Canadian pupils moving into the training schools the RCAF would have to make full use of the Air Cadet Movement* as a source of aircrew recruits and provide special academic training for recruits who were physically fit for air operations but lacking in educational requirements.

Although most items on the agenda were settled with little difference of opinion, Canada and the United Kingdom found themselves poles apart over the policy of granting commissions. The trouble lay with the original BCATP agreement and subsequent amendments whereby fifty per cent of the pilots and observers and twenty per cent of air gunners and wireless operator/air gunners were to be commissioned. Half the allotted number of commissions were to be granted on graduation and half were to be given later during operations.[19] There was no complaint that Canadian airmen did not receive their fair share of commissions under this arrangement but Power was annoyed that Canada was not able to take independent action in commissioning its own airmen. He disliked the quota system immensely claiming that it was unfair, an obstacle to recruiting and "based on the British idea that only a certain number, and a certain class of person at that, were qualified to hold the King's Commission .... "[20] In May, just before the conference opened, he told the House of Commons that "one of the matters ... I hope to take up is the advisability and absolute justice of making every member of aircrew an officer."[21]

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* Interest in an air cadet movement developed before the war and culminated in the formation of the Air Cadet League of Canada in November 1940 to train and motivate youths to join the RCAF. It became closely affiliated with the RCAF and the secondary school system in every province. As of 28 February 1945 there were 380 active air cadet squadrons with a total enrolment of 29,100 cadets. An estimated 3,490 air cadets enlisted in the RCAF. "Air Cadet League of Canada," DHist 74/7, IV, 926-960.

At the conference the Canadians proposed that all pilots and observers be commissioned on graduation and the percentage of commissions granted to other categories be increased to twenty-five per cent on graduation and a further twenty-five per cent in the field. In support of this they argued that the responsibility imposed in commanding large and expensive aircraft merited officer rank; that all members of aircrew were exposed to the same risks and all had an equal claim to a commission; that morale was lacking where some members of the same crew had the privileges of officer status and others did not; and that the assurance of a commission on graduation would stimulate recruiting. The British countered with arguments against the proposed Canadian policy which they claimed would deflate the value of commissioned rank. The opportunity to fly, they said, without the promise of a commission, was enough to attract good men and the ability to fly an aircraft did not necessarily warrant a commission which was given "in recognition of character, intelligence... capacity to lead, command, and set an example." The United Kingdom was opposed to extending the percentages, and contended that these were flexible enough to provide for the commissioning of all personnel "who were suitable and were recommended by the appropriate authorities."[22] Since the appropriate authorities in many cases involving members of the RCAF would be RAF officers, the Canadians found this proposal doubly objectionable.

In the end Canada adopted its own commissioning policy. All pilots, observers, navigators, and air bombers "who are considered suitable according to the standards of the Government of Canada and who are recommended for commissioning will be commissioned."[23] while the existing quota for air gunners and wireless operator/air gunners, namely, twenty per cent of graduates to receive commissions was retained.* Although this was more satisfactory from the Canadian point of view it meant that there were now two commissioning policies in the BCATP, one for Canadians and one for the British and other members of the Commonwealth. In Canada this sometimes led to invidious comparisons when, for instance, a pilot from the RAF, the RAAF, or the RNZAF, graduated at the head of his class but because of the quota system was promoted to sergeant rank only, while Canadians standing further down the list received commissions. In the United Kingdom, and other theatres of war where thousands of Canadian airmen served in British squadrons, innumerable difficulties arose. In many instances the RAF commanders of these units, who were the recommending authority, were often ignorant of Canadian policy and followed the generally accepted fifty per cent rule of the RAF. Even when aware of the Canadian regulation, however, a British officer commanding a squadron in which Canadians were serving was naturally disinclined to recommend promotion to officer status of a Canadian if, in his opinion, other members of the squadron were more deserving.[24]

Because of major revisions in the composition of crews in Bomber Command the new agreement had provided for corresponding changes in the training programme. In March 1942 the Air Ministry had decided that only one pilot was necessary in medium and heavy bombers. A new crew member, air bomber, was introduced and the air observer, whose duties previously included bomb dropping as well as navigating, and who was also expected to pinch-hit for the gunners in an emergency, was reclassified as a navigator. The operation of various electronic aids to navigation now coming into service and the higher standards of navigational accuracy demanded meant that navigation was now a full-time job. Only one wireless operator/air gunner was to be carried instead of two, the other being replaced by an air gunner without wireless training. This ruling meant that Vickers Wellingtons, previously manned by two pilots, an observer, and two wireless operator/air gunners, in future would carry one pilot, a navigator, an air bomber, an air gunner, and a wireless operator/air gunner. As the latter was becoming more and more a specialist in radio operating, an additional air gunner was sometimes added to the crew. The standard crew in Avro Lancasters and other heavy bombers consisted of seven members: a pilot, navigator, air bomber, wireless operator/air gunner, two air gunners, and a flight engineer* who if necessary could take over from the pilot and land the aircraft. On medium bombers this emergency role fell to the lot of the air observer. The size of the crews varied according to mission. When loaned to Coastal Command for long-range reconnaissance patrols heavy bombers carried two pilots as did Consolidated Liberators, Boeing Flying Fortresses, and Consolidated Catalinas.[25]

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* According to information provided by the British at the Air Training Conference the USAAF commissioned 80% of pilots, 100% of navigators, 50% of bombardiers but no air gunners, radio operators, or flight engineers.

To meet its needs for navigators, air bombers, and air gunners in the foreseeable future the RAF required, above and beyond the schools already in operation, the equivalent of nine air observer schools (although the air observer category was gradually phased out the name "air observer school" was retained) and two-and-a-half air gunnery schools. In addition, it was agreed to add four more service flying training schools, four operational training units, only three of which materialized, an additional general reconnaissance school, and an instrument flying school.[26]

The creation of this extra capacity presented the RCAF with a gigantic problem, indeed with several problems. But they were the kinds of problems to which the Canadians, in their commitment to train aircrew for the RAF, had now grown accustomed. The training programme was never stabilized for any length of time as one crisis followed on the heels of another. The greatest upheaval came with the transfer of the British schools to Canada but other changes were constantly occurring in the training programme to meet the demands of aerial warfare. For example, in 1940 the RAF asked for pilot training courses to be shortened to meet an urgent need but in 1941 requested that courses be extended to provide better-trained pilots. It later urged that trainees be given more night flying and more instrument flying without increasing the overall training period, and a place found in the curriculum for aircraft recognition. Similar demands were made in regard to the training of air observers and wireless operator/air gunners, the training programme for the latter being extended three times during 1940 and 1941. As administrator of the BCATP the RCAF had to make the changes requested by the RAF as quickly as it could while keeping all schools working to capacity and coping with shortages of equipment and instructors. The surprising thing is that it was all done with only a few muttered grumbles from the Canadians and very little criticism from the British. One RCAF officer, however, referring to the endless requests from across the Atlantic, was heard to remark facetiously that planning at the Air Ministry "seemed to be done by a couple of gypsy women with a greasy deck of cards."[27]

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* Flight engineers, who were mostly British even in RCAF squadrons, were not trained in the BCATP before July 1944, when a school was opened at Aylmer, Ont. (see Chapter 8).

In expanding the Plan to meet the new requirements, the RCAF planned to increase the size of most of the air observer schools from a capacity of 126 trainees to 676.[28] This part of the programme was supposed to be in effect by the end of 1942 but the critical shortage of labour and scarcity of British Columbia timber for hangar construction caused unexpected delays. Only one Air Observer School, No. 8 in Quebec, was operating at the planned level by the target date. To meet the demand for more air gunners three bombing and gunnery schools, No. 3 at MacDonald, Man., No. 9 at Mont Joli, Qué., and No. 10 at Mount Pleasant, PEI, were set aside mainly for instruction in air gunnery. The other seven were to be enlarged to train both air bombers and air gunners.[29]

Construction was only one of the major problems with which training officials had to contend. New courses had to be planned for navigators and air bombers and those for the gunners had to be revised. More aircraft had to be obtained, more instructors trained, and many more staff pilots were needed as "air chauffeurs" at the air observer and bombing and gunnery schools. During this same period the course for pilots was extended from twelve to sixteen weeks. Flying time was increased from seventy-five to one hundred hours, with more time being spent on instrument flying and night cross-country exercises.[30]

The expansion of the BCATP as provided for in the 1942 Agreement was directly related to plans for the expansion of the RAF's Bomber Command, then in the process of re-equipping its squadrons with four-engined Handley Page Halifaxes and Avro Lancasters and preparing to step up the air offensive against Germany. In manning these aircraft the RAF depended almost entirely on the flow of aircrew from Canada. Individual aircrew training was still being carried out in the United Kingdom and other parts of the Commonwealth but not on nearly the same scale that it was in Canada. In 1943 the total aircrew production in Canada was 39,354 and in the other Dominions, exclusive of India, it was 19,423,[31] nearly all employed in home defence operations or in theatres outside of Europe. Most of the Australians who flew with Bomber Command, for example, were trained in Canada and those who completed their training in Australian schools (9,369 in 1943)[32] were needed for local defence requirements. Production figures for the United Kingdom are not available but in 1943, not counting the Central Flying School, the Empire Navigation School, and the Central Gunnery School, all highly specialized institutions, two service flying training schools, three air observer schools, seven gunnery schools and a school for flight engineers were located there.[33] The British, of course, also had their six schools in the United States[34] but most of the graduates of those completed their training in Canada.

The 1942 air training conference was an important turning point in the history of the BCATP. Commonwealth air training was centered in Canada to a greater degree than before* and the programme entered upon a new surge of activity that would carry over into the next year when the full fruits of expansion would appear. The significance of it all was summed up by Mackenzie King as the conference came to an end:

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* About 45 per cent of all Commonwealth aircrew were trained in Canada but from 1942 onward, owing to the transfer of RAF schools and the enlargement of other schools, the percentage trained in Canada would be much higher. Other principal training centres, excluding the United States and India, were the United Kingdom (88,022), Australia (27,837), South Africa (24,812), Southern Rhodesia (10,033), and New Zealand (5,609). Hillary St. George Saunders, *Royal Air Force, 1929-1945. III: The Fight is Won* (London: HM 1954), 371-372.

> The new agreement reaffirms and reinforces the determination of the nations of the British Commonwealth to maintain the training of aircrews on a vast and increasing scale .... The original agreement was conceived in a spirit of vigorous enterprise. The agreement concluded this morning will be carried through in the same spirit and will play its part in building up with certainty and with speed air forces of overwhelming and terrifying strength.[15]

References — Chapter 6

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7

Pilot Training in the BCATP

The Flying Instructors' Lament

"What did you do in the war Daddy?
How did you help us to win?"
"By teaching young fellows to fly, Laddy
And how to get out of a spin."

Woe, alack and misery me.!
I trundle around in the sky,
And instead of machine-gunning Nazis,
I'm teaching young hopefuls to fly.

So its circuits and bumps
from morning to noon,
And instrument flying till tea,
"Hold her off.!" – "Give her bank.!" – "Put your
undercart down.!" -
"Your skidding.!" – You're slipping.!" – that's me.

And so soon as you have finished with one course,
Like a flash up another one bobs,
And there's four more* to show round the cockpit,
And four more to try out the knobs.!

But sometimes we read in the papers,
Of deeds that old pupils have done,
And we're proud to have seen their beginnings,
And shown them the way to the sun.[1]

The flying instructors of the BCATP must be counted among the unsung heroes of the war. Chosen from the best pilots available, often restless and ambitious for action on a fighting front, most of them keenly felt the frustration of their work. Some sought escape, and a posting overseas, by deliberately committing misdemeanours such as flying a Tiger Moth, or even an Anson, under a bridge. But the majority performed their task conscientiously if somewhat reluctantly.

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* The usual ratio of instructors to pupils was one to four.

The RCAF began the war with a woefully small number of flying instructors but a sound tradition of pilot training. It was based on that of the RAF and from time to time Canadians attended the Central Flying School at Uphaven, England, the authority on flying and flying instruction for all the air forces of the Commonwealth.[2] Until 1939 there were not enough flying instructors in the RCAF to warrant a separate organization but in April of that year an instructional flight was formed at Camp Borden under Flight Lieutenant G.P. Dunlop. In July it was elevated to the status of a school and in January 1940 moved to Trenton as an integral part of the BCATP. In April it was redesignated as the Central Flying School and from this point on the story was one of rapid growth as "the school expanded month by month and flew at full throttle trying to keep pace with the seemingly insatiable demands of the BCATP for more and more qualified instructors."[3] By the end of 1941 a total of 1,938 instructors had graduated and by 31 July 1942 the number had risen to 2,622.[4]

To meet future requirements and permit the rotation of instructors the new training agreement signed in June 1942 made provision for three separate schools for flying instructors. They were formed in August: No. 1 at Trenton for instructors on twin-engined machines, No. 2 at Vulcan, Alta., (later relocated at Pearce in the same province) for Harvard, instructors and No. 3 at Arnprior, Ont. for instructors at elementary schools. At Nos. 1 and 2, each of which had an establishment of sixty-six instructors and four testing officers, the courses lasted for eight weeks while at No. 3, which operated with an establishment of twenty-six instructors and two testing officers, the courses were only six weeks long. The graduates were rated in five categories: "A1", granted only to experienced instructors of exceptional ability, "A2", the equivalent of very good, "B1" or "B2," outstanding or capable instructors, and "C", granted provisionally to candidates who had potential and might mature with practice. Not all the candidates were successful. For example, as of 31 January 1945 No. 1 at Trenton had

had an intake of 5,890 instructor candidates 1,208 of whom did not qualify, a wastage rate of about twenty-one per cent.*[5]

Some of these failures were undoubtedly deliberate for it was difficult to convince keen young pilots who had only recently won their wings, that they were needed in Canada as instuctors. Group Captain P.Y. Davoud, assistant chief flying instructor at the Central Flying School from June 1940 to May 1941, recalled that some candidates pretended that they could not fly and instruct at the same time.

> One or two got away with this and wangled postings overseas. But we soon got wise to the situation and if someone didn't want to instruct we arranged a posting to a bombing and gunnery school as a target towing pilot and after that we had no trouble.[6]

The three flying instructors' schools came under the supervision of the Trenton Central Flying School, a prestigious institution whose main function was to standardize flying training methods and techniques throughout the BCATP. It conducted seminars on flying training, gave post-graduate courses to improve the qualifications of promising "A2" category instructors, and held refresher courses for senior instructors.[7] Visiting flights of four or five officers periodically inspected the various pilot training schools, flying with instructors and also with their pupils, though not so much to test them as those who taught them. The inspection tours, which usually lasted for the better part of a week, concluded with a list of observations, favourable and unfavourable, by the visiting flight.[8] In attempting to standardize the instructional practices and techniques throughout the BCATP the Central Flying School was challenged by the size of the scheme. Most of the elementary flying training schools and the service flying training schools had a student population of over two hundred and an instructional staff of about fifty which made it virtually impossible to make a thorough examination of teaching methods and testing procedures. The turnover in personnel, which meant that there was always a fairly large number of new and experienced instructors, was another factor working against standardization. A third was the arbitrary method of selecting instructors by creaming off the top ten graduates at service flying training school or in extreme cases by assigning an entire class to instructional duties.* Under the circumstances this rough and ready method was perhaps unavoidable but it inevitably resulted in pilots who were temperamentally unsuited being forced into the instructor role. Owing to its heavy work schedule the Central Flying School was unable to devote much time to training research. Not until 1944, when the reduction of the BCATP enabled it to catch its breath, was it able to introduce standardized testing procedures.[9]

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* No. 1 Flying Instructors' School considered itself to be a direct descendant of the Central Flying School and the figure 5,890 includes the intake of the latter school up to 31 July 1942.

RCAF Station Trenton which housed the Central Flying School, No. 1 Flying Instructors' School, No. 1 Composite Training School and a Reselection Centre for washed out aircrew, was the largest unit of the BCATP. It had a strength of over 3,000 air force personnel plus about 500 civilian employees. (PMR 79-279)

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* W/C John M. Godfrey, who graduated at Camp Borden in July 1940 recalled that "All members of our class were chosen as instructors but were not informed about this until the last day. Some were disappointed because they wanted to go overseas, but later on many did." Interview with Senator J.M. Godfrey, 22 Feb. 1977, Godfrey biographical file, DHist.

The lack of a consistent policy of instructor rotation helps to explain why instructor assignments were so unpopular. In May 1942 a minimum instructional tour of twelve months was decided on. This was gradually extended to eighteen and key personnel, including those employed at flying instructor schools and senior instructors at service flying training schools were retained indefinitely.[10] Wing Commander R.W. Bannock, for instance, spent four years on instructional duties at Central Flying School and No. 3 Flying Instructors' School before being posted overseas.[11] Mild mannered, unassuming, and sincerely devoted to flying Bannock accepted his assignment in good conscience. But there were others who deliberately made nuisances of themselves, disregarding flying regulations, overstaying their leave, and committing other less serious offences. British, Australian, and New Zealand pilots held back as instructors in Canada against their will felt the frustration even more than their Canadian counterparts and some were perhaps more inclined to work out their feelings on their pupils, particularly if they happened to be Canadians.[12]

Reporting on the instructor problem in 1943 Breadner told the Supervisory Board that because of "An antagonistic attitude towards training duties... it has been found impossible to secure competent instructors... in the required numbers." To help counteract this feeling officers commanding service training schools were directed to impress pupils with the need for instructors "pointing out that selection for this duty is a tribute to their own ability and that as instructors they would be making a most important contribution."[13]

The problem of instructor discontent persisted until the war situation permitted the curtailment of the BCATP. Early in 1944 some schools were closed and, in posting pilots to the United Kingdom, preference was given to flying instructors, five hundred being released for overseas service during the year.[14] Having thoroughly mastered the art of flying during their tour of instructional duty they gave a good account of themselves in battle. Bannock went overseas in February 1944 but did not begin operational flying until June when he was serving with 418 Squadron flying de Havilland Mosquitoes. By the end of the war he was commanding 406 Squadron, had shot down nineteen V.1s (flying bombs) — more than any other Canadian pilot — and in addition had been credited with destroying eleven enemy aircraft.* In 1944 eighty-five per cent of the pilots in these two squadrons were ex-flying instructors which probably accounts for their outstanding operational record and low casualty rate.[15]

The basic criteria in selecting pilot candidates were physical fitness and learning ability. By the time they arrived at elementary flying training school they had usually undergone three medical examinations, a preliminary one on enlistment, another at manning depot, and a more thorough one at initial training school where medical officers probed for minor defects in blood pressure, vision and heart action which might bar an invididual from pilot training even though he was otherwise in excellent health. The maximum acceptable pilot height was six feet three inches (1.9 m) and the maximum weight two hundred pounds (90 kg). In 1940 candidates must have passed their eighteenth birthday but not their twenty-eighth.[16] But, reflecting manpower problems, the age limitations fluctuated upwards to thirty-five and downwards to seventeen.

During the first two years of war junior matriculation, the equivalent of grade twelve in British Columbia and Ontario and grade eleven in the other provinces, was a prerequisite for pilot training. Applicants lacking this minimum requirement were advised to return to school.** In October 1941, however, when young Canadians with the necessary academic qualifications were no longer coming forward in the desired numbers, the formal education requirement was replaced by a psychological test known as the RCAF Classification Test which was designed to measure learning ability rather than schooling level. If an applicant scored well on this test he was acceptable as a pilot even if he had left high school without a diploma.[17] His academic qualifications were upgraded to the standard required by the RCAF through special classes given either by the War Emergency Training Programme, which conducted technical and academic courses in every province,[18] or by any one of a number of universities and colleges which offered courses in pre-aircrew tuition. As a result of this policy the RCAF always had on hand a large pool of untrained aircrew. In March 1943, for instance, sixteen hundred aircrew recruits were brushing up on their mathematics and science in classrooms of the War Emergency Training Programme and eleven hundred and fifty were taking pre-aircrew training at various universities.[19]

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* Other flying instructors who after two or three years of instructing in the BCATP went on to remarkable achievements overseas, being credited with ten or more enemy aircraft destroyed, include W/C H.D. Cleveland of Vancouver; S/L D.C. Fairbanks, from Ithaca, New York; W/C R.G. Gray, Edmonton; S/L G. Hill, Pictou, NS; S/L R.A. Kipp, Vancouver; W/C D. Laubman, Westlock, Alta; S/L D.A. MacFadyen, Toronto; and F/L J. MacKay, Winnipeg. Hugh Halliday, *The Tumbling Sky* (Stittsville, Ont.: Canada's Wings, 1978), 75-80, 87-93, 109-115, 121-129, 165-171, 179-186, 193-202, 203-207.

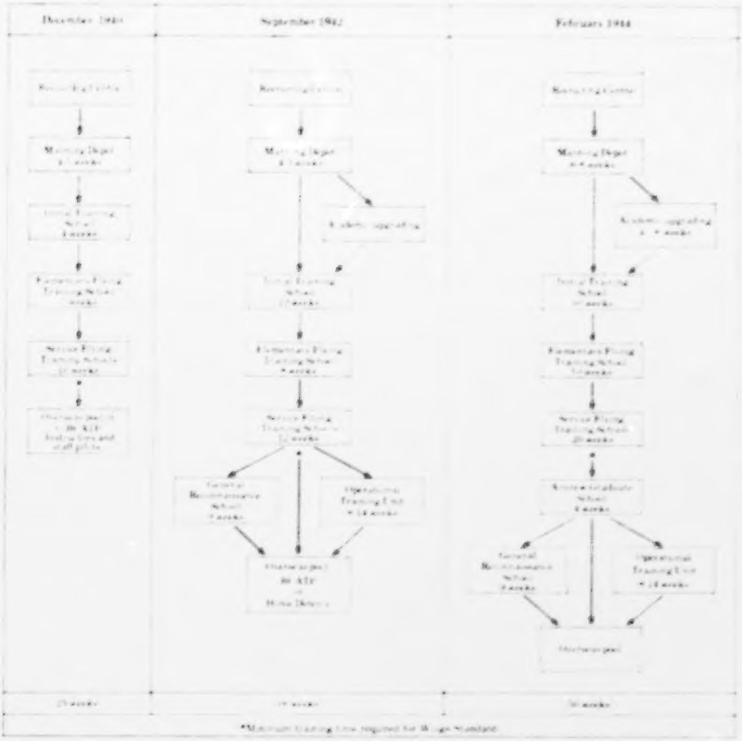
** One who accepted this advice was J.T. Caine who had left school without completing grade ten to work on his father's fur farm near Edmonton. To qualify for pilot training Caine completed junior matriculation through correspondence courses offered by the Canadian Legion. Later he became the most outstanding night fighter pilot in the RCAF.

Before a recruit was definitely assigned to pilot training he appeared for an interview before an aircrew selection board of two or three officers. If, after examining his medical reports, personal history file, and the scores obtained on the Classification Test and various aptitude tests, and finally the candidate himself, the board felt that he had good pilot potential and a sincere interest in flying, it would recommend posting to an elementary flying training school.[20] If in doubt the board might suggest another aircrew category or a ground trade. The candidate had little choice other than to accept the board's decision disappointing though it might be.

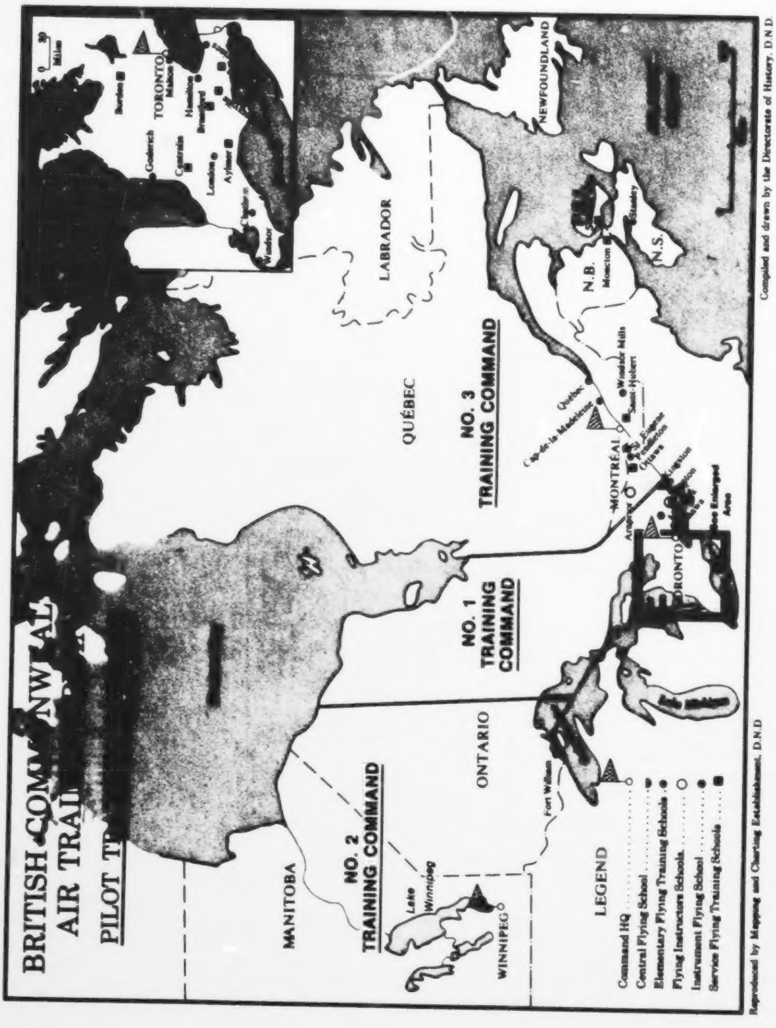
The aircrew selection programme, at first conducted at recruiting centres, was gradually shifted to the manning depots in 1942. These were large reception centres through which all direct entry recruits were funnelled and in the process were changed from civilians to airmen. In January 1942 there were five of these units: No. 1 in Toronto, No. 2 at Brandon, Man., No. 3 at Edmonton, No. 4 in Quebec, and No. 5 in Lachine (Montreal), and a few others were added as additional accommodation as needed. Most aircrew recruits from Eastern Canada, however, were sent to No. 1 Manning Depot located in the Coliseum Building at the Toronto Exhibition Grounds with accommodation for over five thousand men. Most of the recruits from the west went to No. 3 at Edmonton, also located at the local exhibition stadium, though a fairly large number were sent to Brandon and some to Toronto.

TABLE A-2

Usual sequence of pilot training in the BCATP


December 1940
September 1942
February 1944
Recruiting Centre
Manning Depot
Academic upgrading
Initial Training School
Elementary Flying Training School
Service Flying Training School
General Reconnaissance School
Operational Training Unit
Overseas pool
Overseas pool
*Minimum training time required for Wings Standard

BCATP — pilot training schools — Eastern Canada


BRITISH COMMONWEALTH
AIR TRAI
PILOT T
MANITOBA
NO. 2 TRAINING COMMAND
Lake Winnipeg
WINNIPEG
ONTARIO
Fort William
NO. 1 TRAINING COMMAND
QUÉBEC
NO. 3 TRAINING COMMAND
LABRADOR
NEWFOUNDLAND
N.B.
Moncton
N.S.
Québec
Cap-de-la-Madeleine
Windsor Mills
MONTRÉAL
Ottawa
Kingston
TORONTO
See Enlarged Area
Goderich
Centralia
London
Aylmer
Windsor
Borden
Malton
Hamilton
Brantford
Miles
LEGEND
Command HQ
Central Flying School
Elementary Flying Training Schools
Flying Instructors Schools
Instrument Flying School
Service Flying Training Schools

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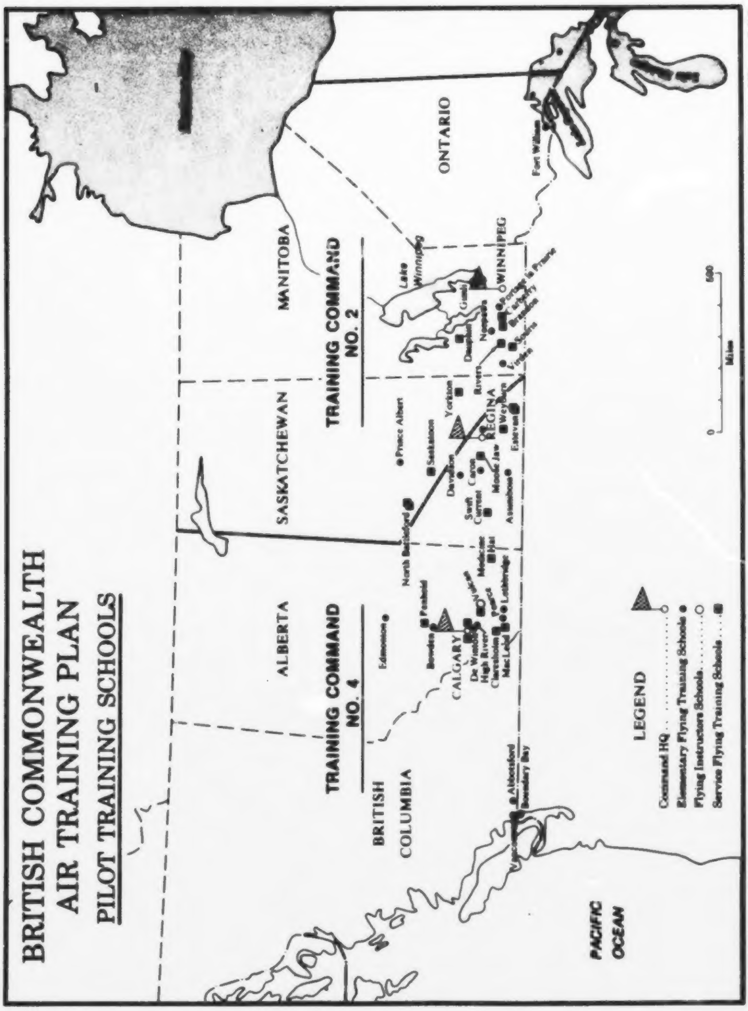
Compiled and drawn by the Directorate of History, D.N.D.

BCATP — pilot training schools — Western Canada

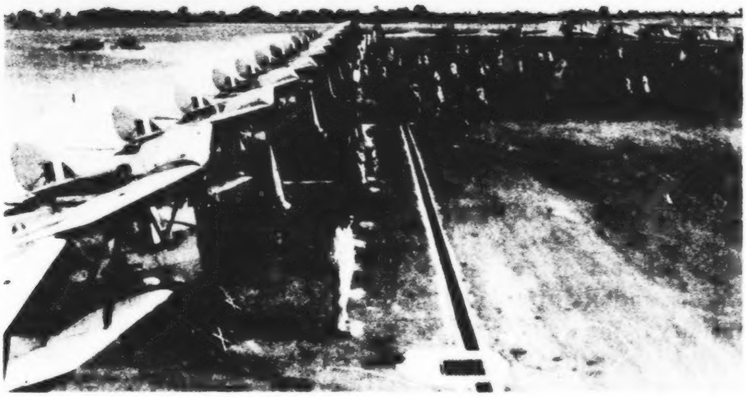

BRITISH COMMONWEALTH
AIR TRAINING PLAN
PILOT TRAINING SCHOOLS
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
TRAINING COMMAND NO. 4
TRAINING COMMAND NO. 2
PACIFIC OCEAN
Vancouver
Abbotsford
Boundary Bay
Edmonton
Bowden
Penhold
CALGARY
De Winton
High River
Claresholm
MacLeod
Vulcan
Pearce
Lethbridge
Medicine Hat
North Battleford
Prince Albert
Saskatoon
Davidson
Swift Current
Caron
Moose Jaw
Assiniboia
REGINA
Weyburn
Estevan
Yorkton
Rivers
Virden
Souris
Dauphin
Neepawa
Carberry
Brandon
Portage la Prairie
Gimli
WINNIPEG
Lake Winnipeg
Fort William
LEGEND
Command HQ
Elementary Flying Training Schools ●
Flying Instructors Schools ○
Service Flying Training Schools ■
0
500
Miles
Reproduced by Mapping and Charting Establishment, D.N.D.
Compiled and drawn by the Directorate of History, D.N.D.

Life at a manning depot, where the recruit usually spent four to five weeks, was fairly strenuous. When not being interviewed, tested or lectured to, the would-be airman spent long hours drilling on the parade square.

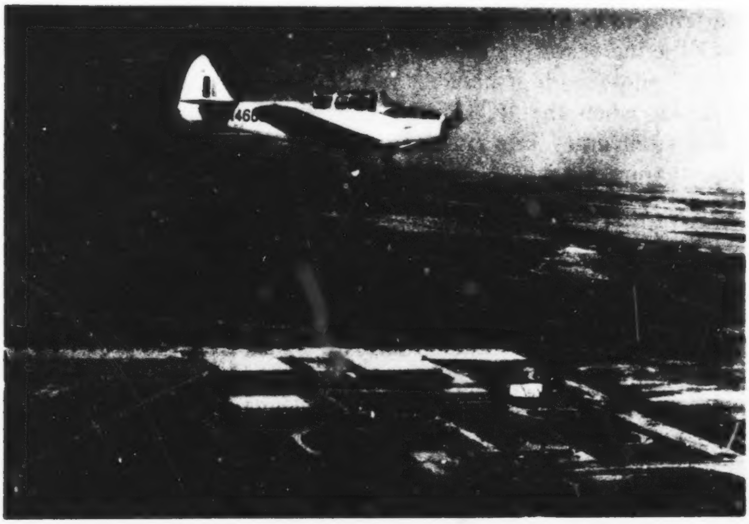
> He learned how to march, how to salute and to bring his eyeballs around with a click.... He became the proud possessor of boots, tunic, fatigue pants, cap, four shirts, two suits of underwear, socks and all the odds and ends which comprised the equipment of the airman in embryo. He learned that boots must be kept well shined, buttons polished, face clean shaven at peril of his liberty.... He slept upper or lower according to liking or luck in a double bunk. He received the princely salary of $1.30 a day.... By the end of his recruit training .... the young man was ready to move a step higher...[21]

If selected as a pilot his path took him to three different schools: an initial training school for pre-flight instruction, an elementary flying training school, and finally to a service flying training school where, if all went well, he received the coveted wings badge of a fully-trained pilot. The first group of pilots entered No. 1 Initial Training School in Toronto on 1 May 1940 and completed their training at No. 1 Service Flying Training School at Camp Borden on 4 November.[22] The entire course lasted twenty-seven weeks. To speed up the output of pilots the training period was shortened to twenty-two weeks in October 1940 but in 1941 and 1942 the increased production of pilots and the demand for better trained pilots made it possible and desirable to extend the course. In 1943, when the BCATP reached peak production, the time taken from entry into initial training school to graduation was close to thirty weeks.

At initial training school pre-flight instruction was given in aerodynamics, engines, navigation, meteorology, mathematics, and science. The BCATP agreement called for three of these schools but the number was subsequently increased to seven. They were located in leased accommodation: No. 1 took over the premises of the Eglinton Hunt Club in Toronto, No. 2, in Regina, occupied Regina College and Regina Normal School, No. 3, primarily for French-speaking recruits, was housed in the Sacred Heart College in Victoriaville, No. 4 used residence buildings at the University of Alberta, and No. 5 the Ontario Provincial School for the Deaf at Belleville. Classrooms for No. 6 were provided by the Toronto Board of Education and for No. 7 by the Saskatoon Normal School and Bedford Road Collegiate.[23] The first BCATP pilots



Students and instructors walk to their Tiger Moths for an early morning flight at No. 20 EFTS, Oshawa, Ont. The school was operated jointly by the flying clubs of Oshawa, Kingston anf Brant-Norfolk. (PL 5356)



No. 19 EFTS, Virden, Man. looking north. The grass covered field can be seen in the background with aircraft lined up outside the two small hangars. Overhead is a Fairchild Cornell trainer. (PMR 81-215)

A good argument for hard surfaced runways. With few exceptions, elementary flying was done from grass covered fields which were safer and easier for beginners. When this field at No. 9 EFTS at St. Catharines become too muddy in March 1941 flying was temporarily transferred to No. 16 SFTS at Hagersville. (PMR 75-353) F. Pattison photo.

spent only four weeks at initial training school but ground instruction was given more importance as the war went on and by October 1942 the course had been lengthened to ten weeks. While the course content changed very little, more time was allocated to the subjects taught and the quality of instruction was greatly improved. The average pupil at initial training school was an eager learner, enthused with the prospect of flying and anxious to ensure that he remained in the pilot stream.*

At elementary flying training school pilot candidates came face to face with their first aeroplane and the instructor who would teach them how to fly it. When the BCATP got under way the elementary time-table provided for a course lasting eight weeks which

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* Although selection procedures were centralized at manning depots some weeding out was still done at initial training schools where the failure rate was approximately twelve percent. "British Commonwealth Air Training Plan, Flying Training," Initial Training Schools, DHist 181.009(D89A)

LAC Jean Pariseau of Donnelly, Alta., a typical pilot candidate. The white cap flash identifies him as an aircrew trainee and the propellor worn on the sleeve shows that he has obtained the rank of leading aircraftman. (PMR 81-136) J. Pariseau photo.

included fifty hours of flying time interspersed with one hundred and twenty-six hours of ground lectures. In the summer of 1940 the training period was cut to seven weeks[24] but pupils were hard pressed to master the syllabus in the shorter interval and in October 1941 the eight weeks' programme was restored. The amount of flying time was increased to sixty hours with a maximum of seventy-five allowed for slow learners.[25] After eight hours of flying instruction a student pilot was supposed to be ready for his first solo flight — an important milestone in a pilot's career but a stumbling block for many. Here is how one trainee remembered this experience thirty years later.[25a]

Ma première envolée

Le premier avion que j'avais aperçu
Venait-il de l'espace? Avait-il aucun but?
Je l'ignore toujours,
Mais je sais que c'est lui (il n'en fait aucun doute)
— Vestige encore viable de la très grande joute
Qui capta dès ce jour
Mon imagination. Je n'avais que six ans
— Il en avait bien douze, mais ses vrombissements
Me laissaient croire à plus —
Et ses démonstrations (véritables prouesses)
Confirmaient son envoi d'une étrange déesse
Qui habitait les nues

Mais lorsque s'assombrirent — occasion ironique
Les espoirs que la paix, surtout après Munich,
Allait se préserver,
J'ai cru évanouies mes chances de pouvoir
Un jour, dans les nuages et l'azur bleu, mouvoir
Mon corps à volonté.
Il me fallut attendre d'avoir mes dix-huit ans
— L'âge au nombre magique qui rend l'adolescent
Capable de tout faire;
Je restai aux études jusqu'à la Versifi'
Avant de m'enrôler comme pilote-apprenti
À même l'armée de l'air

Armée sans discipline serait vite fauchée,
Aussi faut-il savoir obéir et marcher
En respectant la ligne;
Pilote sans mécanique ou sans navigation

Ferait vite faillite dans une compétition
Et ne serait point digne
De relever le gant traînant d'un ennemi
Qui lui chercherait pouilles ou simplement ennui;
Ainsi il doit apprendre,
Pendant un certain temps, à manier la plume,
À changer les pistons, à déceler les brumes:
Dieu! comme il faut attendre

Puis un matin d'automne froid et ensoleillé
Je réalise enfin mon rêve désiré
De partir en envol;
J'enfourche un parachute et prend ma place à bord
D'un monoplan où moniteur, assis en lord,
Doit contrôler le vol
Nous décollons en trombe, quand mille vibrations,
Comme par enchantement, arrêtent, et confusion
Fait place à pure joie,
Car me voici enfin maître de l'air. On monte
Saluer nuage en passant, tel un vieux ponte
Cherchant as par son roi

Et on parcourt le grand circuit réglementaire
À mille pieds, croyant que l'on ne voudrait faire
Autre chose que cela.
Puis, vent devant, on ralentit les gaz tout en
Piquant le nez vers le terrain; on se pose en
Douceur: c'est fait mon gars!
Plus tard j'y fus fin seul et fis acrobaties
Mais aucune envolée n'a si bien réussi
À demeurer au faîte.
Et si elle est empreinte, ma première envolée,
Dans mon esprit, n'aie crainte, c'est qu'elle fut d'emblée
Ma première conquête.

If not ready to go solo "you were usually sent for a ride in the 'washing machine' — i.e. a check ride with the Chief Flying Instructor, which, in many cases was the final formality — preceding the axe."[26] Flying ability was tested again after the completion of ten hours in the air, after twenty hours, and at the end of the course. On the final flying test the examining officer expected the students to be able to carry out all normal aircraft manoeuvres "confidently and satisfactorily," to land consistently well, to fly by the aid of instruments alone, and to complete a cross-country flight designed to test his skill in map reading and navigation.[27] Although the length of the course remained fixed at eight weeks the syllabus

LAC W. K. Rock of Windsor, Ont. and LAC T. S. Wong of Vancouver brush up for their final exams at No. 9 EFTS in November 1943. Both graduated as pilots in 1944 but like many Canadians who won their wings at that time they did not realize their ambition to serve overseas. (PMR 75-358) F. Pattison photo.

was constantly changing. On the ground more time was spent in the Link Trainer to improve instrument flying technique. Aircraft recognition, at first treated rather sketchily, was given more space on the curriculum and much more attention was given to night flying.[28]

The elementary syllabus kept the fledgling aircrew fully occupied. Training progressed "at quite a hot pace, and keenness was high," wrote Richard Gentil, a British pilot who trained at No. 10 Elementary Flying Training School at Hamilton. Although there were leave passes every week-end "not many ... availed themselves of the chance of living it up, but I used to go down to Niagara occasionally just to look at those incredible falls for hours on end." Len Morgan, an American who learned to fly in 1941 at No. 9 Elementary School at St. Catharines, Ont, recalled that his first ride with an instructor left him "exhausted, somewhat discouraged and absolutely determined to learn how it was done." Ten days later he made his first solo flight — "a memorable day." He arrived at St. Catharines on 3 July and left on 20 August. In the interim the members of his class had smashed "a fair share of wingtips, shattered a few props and wrote off one plane completely." Fortunately, they suffered no casualties.[29]

Out of a total of 58,644 pilot trainees taken into the elementary schools, some 13,200, 22.5 percent, failed to graduate for reasons other than sickness, injury or death.*[30] At first, in the absence of any firm policy, instructors tended to be lenient with their charges. However, in September 1940 Leckie, acting on advice from the Air Ministry, suggested a wastage rate of between twenty and twenty-five percent at the elementary level and between ten and twelve and one half percent for service training.[31] These were to be taken as guide-lines only but Leckie reminded the four air training commands that "... men and women of 70 and 80 can be taught to fly elementary aircraft but what we require are pilots to fly Spitfires, Cyclones, Stirlings, etc." A student was not to be carried along simply "because he is such a nice fellow." The question to ask was "Will the individual become an efficient service pilot?"[32]

This approach was appreciated by flying instructors. "At first we were perhaps inclined to be a bit too easy" recalled Wing Commander J.M. Godfrey, who instructed at No. 5 Service Flying Training School at Brantford, Ont. and No. 15 at Claresholm, Alta. before being posted overseas as a fighter pilot:

> If a pupil was trying hard and had a good attitude he might get the benefit of the doubt. But when these fellows got overseas they were the first to become casualties and then we began to weed out the weaker pilots. If they weren't going to become good pilots there was no use putting them through.[33]

The overall wastage rate for British pupils at elementary schools was 19 per cent and for Canadians 23.6. The better showing of the British was attributed to the method of pilot selection used by the RAF known as grading. Introduced in 1942 it involved a twelve hour air test designed primarily to give a reading on pilot aptitude. The trainees were then graded in descending order according to their performance and those with the better grades were selected as pilot candidates and sent to Canada for training.

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* With few exceptions these figures include only RAF or RCAF candidates. Australians and Zealanders took elementary training at home.

most going to the transferred schools. Notwithstanding their twelve hours in the air they took the entire elementary course from beginning to end. Since they had already demonstrated their potential their instructors felt a responsibility to get them through if at all possible. In the other elementary schools of the BCATP where the majority of pupils were Canadians, the dominant theory was that a certain percentage of pupils were bound to fail and should be eliminated as soon as possible. This system might appear to be both ruthless and wasteful but it cannot be denied that it turned out good pilots. At service flying schools the Canadians had a wastage rate of 11.9 per cent compared to 15.8 for the British.[34]

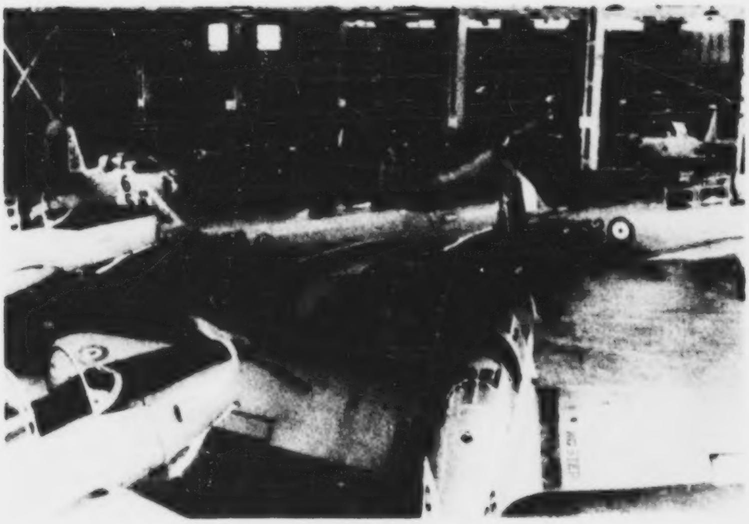
In practice the proportion of Canadian pupils eliminated in elementary training fluctuated above and below the prescribed rates and varied widely from school to school depending on the potential of the student, the quality of the instruction, and the needs of the service. The general trend was toward a higher failure rate which instructors were inclined to blame on a decline in the potential flying ability of pilot candidates. This may well have been true but in June 1943, when wastage at elementary schools rose to thirty-three per cent there was a feeling at Air Force Headquarters that, relative to Canada's manpower resources, passing standards were being too rigidly enforced. Reviewing the problem in August 1942, Leckie told the Supervisory Board that "at some units there is undoubtedly a tendency to send down pilots without exhausting the possibilities of successfully graduating them."[35] As a corrective measure a directive was sent to the elementary and service flying training schools telling them to ensure "that aircrew under training are not wasted unnecessarily" and pointing out that "due to the inexperience of a large number of the instructional staffs ... insufficient attention is sometimes given backward students and they have been too ruthlessly eliminated."[36]

A maximum limit of twenty-five per cent wastage at elementary training schools was then imposed by Air Force Headquarters. In contrast to the earlier policy of eliminating doubtful material as early as possible every pupil was now to be given at least twelve hours of dual instruction, instead of eight, before a decision was made to discontinue training. If there was any doubt the appropriate Training Command Headquarters was to determine if additional instruction would help the trainee.[37] These measures brought the elimination rate to an all-time low of fourteen per cent at the elementary schools and to something less than ten per cent in service flying training.[38]

In the USAAF the overall wastage rate in pilot training, including failures at the elementary and advanced levels, was forty per cent compared to thirty-six per cent in the BCATP.[39] This suggests that, other things being equal, the American standards were either slightly higher or more rigidly enforced. Other points of comparison show that in American schools, as in the BCATP, the greater number of failures occurred in the early stages of training and a much smaller number in the advanced. Those eliminated were not lost to either service as it was the practice in both countries to retrain as many of them as possible in other aircrew categories; a very large number became navigators. South of the border, as in Canada, the wash-out rate for pilots fluctuated widely and for much the same reasons:

> Whenever substantial backlogs of trainees accumulated and the ... requirements of combat units appeared to be stabilized, higher headquarters stressed rigid maintenance of proficiency standards. When, as a result of this policy, the over-all pilot elimination rate rose to a point considered excessive, higher headquarters impressed upon all training establishments the necessity of reducing manpower wastage. This policy constituted a realistic, if crude, means of compromising the conflicting needs for quality and numbers of pilots.[40]

Of all units in the BCATP the elementary flying training schools went through the most numerous changes in size, location, and number, changes which well illustrate the rapid expansion of the plan and the unexpected problems which arose. Initially there were to be twenty-six of these schools each accommodating forty-eight pupils. During the period of acceleration the number of pupils was raised to seventy and in October 1940 it was decided to have only twenty-two schools four of which were to be of double size.[41] In 1941 the capacity of the four larger schools, No. 5 at High River, Alta., No. 8 at Vancouver, No. 19 at Virden, Man., and No. 20 at Oshawa, Ont., was increased to one hundred and eighty, and that of the others to ninety. In November government approval was given to double the size of five more schools: No. 6 at Prince Albert, Sask., No. 11 at Cap de Madeleine, Qué., and No. 9 at St. Catharines, No. 12 at Goderich, and No. 13 at St. Eugène, Ont.[42]



Newly arrived Fairchild Cornells at No. 5 EFTS, High River, Alta. (PMR 81-149) Dennis Yorath photo.

More changes occurred in 1942. Following the outbreak of war in the Pacific, the Sea Island Airport at Vancouver was needed as an operational base and No. 8 Elementary Flying Training School located there was joined with No. 18 at Boundary Bay. Within a few months, however, Boundary Bay was chosen as the site for an operational training unit and No. 18 had to be terminated.[43] To allow for the expansion of air observer schools as agreed on at the Ottawa air training conference in June five elementary schools: No. 1 at Toronto, No. 3 at London, No. 14 at Portage la Prairie, Man., No. 16 at Edmonton, No. 22 at Quebec each of which shared airport facilities with an air observer school, were disbanded. To make up the lost capacity No. 12 EFTS at Goderich and No. 13 at St. Eugène were expanded to accommodate two hundred and forty pupils each, almost five times as many as they housed in 1940. A few other schools were also enlarged and in November a new EFTS, No. 23, was opened at Davidson, Sask.[44] There were now four classes of elementary flying training schools: "A" class having accommodation for ninety pupils, "B" class with one hundred and twenty pupils, "C" with one hundred and eighty pupils, and "D" with two hundred and forty or more.

A line of Tiger Moths on a cold winter morning at Emma Lake used as a winter relief field for No. 6 EFTS, Prince Albert, Sask. (PMR 81-143) R. Crone photo.

Early in 1943 the RAF had to relinquish its American training facilities[45] and to replace the lost output four new service flying training schools were opened in Canada. To supply them with pilots trained to the elementary stage seven more elementary schools were enlarged to "D" class size.[46] By mid-summer 1943, when the BCATP was at its peak there were twenty elementary schools in operation eleven of which were "D" class.* They had just over four thousand student pilots in various stages of flying training.[47]

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* This number included five British schools all located in the prairie provinces: Nos. 31 and 32 at DeWinton and Bowden in Alberta, 33 and 34 at Caron and Assiniboia in Saskatchewan, No. 35 at Neepawa in Manitoba and No. 36 at Pearce, Alta. The latter, however, formed in April 1942 had to be disbanded in August 1942 to make room for an air observer school. These schools were at first established with a full complement of RAF personnel but the British, impressed with the successful operation of the Canadian elementary schools under civilian management asked to have their schools taken over by the flying clubs. This arrangement freed about two thousand RAF ground personnel for service elsewhere. Flying instructors were provided by the RAF.

All of the elementary schools except one, No. 23 at Davidson, were under civilian management. This expedient was working out more successfully than anyone, other than the flying clubs themselves, had anticipated. Their first major achievement had been to open the elementary schools to a speeded-up schedule in spite of shortages of equipment and experienced personnel. "We didn't think you could do it," Breadner frankly admitted to a group of flying club executives and civilian school managers in October 1940, "now we know you can."[48] In 1942, when the elementary schools were shuffled about, some being closed and new ones opened, the clubs and companies simply moved their personnel from one part of the country to another. The Toronto Flying Club for instance, transferred the staff, and their families, of No. 1 EFTS from Malton (Toronto) to DeWinton, a small prairie town near Calgary, to take over the operation of No. 31, a British school previously operated by service personnel. Flying at Malton came to an end on 29 June and on 13 July the Toronto Flying Club, in the guise of the DeWinton Flying Training School Limited, took control of the new school.[49]

The civilian managers of the elementary schools had two unique advantages over the air force officers commanding service schools. If necessary they could buy what they needed on the open market and they enjoyed the full support of the surrounding communities. They received the great bulk of their equipment through air force channels but there were times, especially during the early years of the BCATP, when spare parts, for example propellors, were in short supply and even unobtainable through an air force procurement system plagued by administrative bottlenecks. When this happened aircraft at the service operated schools remained idle. Civilian managers, on the other hand could get these items directly from factories in Canada or the United States and their planes were seldom grounded for lack of spare parts. Because of their civilian organization the elementary schools blended easily into the local communities which took great pride in their operation. Some citizens contributed financially to the working capital of the operating companies while others were employed in various capacities — as mechanics, clerks, cooks, engineers, and labourers. In most instances the manager and at least some members of the instructional staff were local residents. The school managers hired the best cooks and caterers in the community. "Our caterer actu-

Residents of St. Catharines, Ont., including this young woman refuelling a Tiger Moth, made No. 9 EFTS their special war effort. (PMR 75-361) F. Pattison photo.

ally bought a farm and supplied our mess with free products in unrestricted quantities and our chef was the city's best ..." recalled Mr. F. Pattison, manager of No. 9 Elementary Flying Training School at St. Catharines.[50] The result of this type of service, as those who passed through these schools would undoubtedly testify, was that the quality of meals far surpassed those of service schools. Complaints about the inequality of food services eventually reached higher authority. In June 1942, it was brought to the attention of the members of the Supervisory Board of the BCATP who had "a general discussion concerning the high quality of messing at Civilian Operated Schools as compared with that of Service-Type Schools ...." The problem was passed on to the Assistant Deputy Minister of the Department of National Defence for Air but the war was over before the service schools were able to catch up.[51]

A subcommittee of the House of Commons appointed to look into the arrangements made with the flying clubs found little to criticize. The operating cost of the elementary schools was originally estimated at $982.31 per pupil but "Good management coupled with a marked degree of *esprit de corps* among the employees has reduced this amount to ... $864.35 ...."[52]

> ... in every instance all of these clubs and companies are devoting their entire effort to the war training work. They are highly efficient and are carrying on their task without any thought of profits to the company or to private individuals.[53]

If the clubs were motivated more by patriotic reasons than by thoughts of making money it was accepted, not least by the clubs themselves, that they were entitled to a modest profit. However, as a result of good management and the unforeseen large numbers of trainees passing through the elementary schools, an unexpectedly large surplus was accruing to their credit which aroused the concern of the subcommittee. It was also an embarrassment to the clubs who suggested that their allowance of fifty cents per flying hour be reduced to twenty-five. Some of the clubs were investing all their surplus earnings in non-interest bearing Dominion of Canada bonds and the subcommittee recommended that this practice be made compulsory.[54] When the contracts between the clubs and the government were renewed in April 1943 these and various other amendments were incorporated. In brief, payments by the Crown were reduced to three headings: operations and maintenance, crash reserve, and messing. Savings, or losses, on operations and maintenance were divided on the basis of eighty percent for the Crown and twenty percent for the clubs which were also credited with savings on the crash reserve and messing allowance. The latter, however, was always fully spent. In the final accounting, savings turned over to the Crown amounted to just over $6,000,000 while approximately $342,000, to be used in the promotion of civil aviation, was distributed among the clubs.[55]

In 1940, and well into 1941, the flying clubs managed to find enough civilian instructors to keep the elementary schools going. These included older instructors who had been associated with the flying clubs before the war and younger pilots, bush flyers mainly, and a few others with relatively little experience who were hired after the signing of the BCATP agreement. The latter group, which included some Americans, were given an elementary instructor's course by the RCAF. On completing their training they were enlisted in the service and then placed on indefinite leave without pay before being returned to their units — a measure intended to give the air force control over them and thus discourage them from leaving their instructional jobs for more lucrative employment. To all intents and purposes they were civilians; on duty they wore the dark blue uniform provided by the operating companies.[56]

Because these instructors had been hastily trained the RCAF recalled them as time and circumstances permitted to upgrade their qualifications. They were then encouraged to return to their employment as instructors under the same arrangements as before. About half of them expressed willingness to do so but the others preferred operational flying. To find replacements the RCAF, which was more or less obligated to preserve the civilian organization of the schools, looked to its own instructional staff for volunteers who might be willing to revert temporarily to civilian status. A number responded to this proposal, some after a certain amount of persuasion, but most of those canvassed were definitely opposed to the idea of reverting to civilian status. Being told that instructing on Tiger Moths was more important than flying Spitfires seemed to make little impression. Consequently, to fill the vacancies in the larger elementary schools the RCAF had no alternative but to send in instructors on military duty, in uniform and subject to air force discipline.[57]

This policy came into effect in 1942. Some of the civilian managers who resented the step-by-step extension of air force control over their instructors interpreted it as the last straw in a bid to militarize the schools.[58] Whether it was or not is open to question but Mr. Murton Seymour,* whose leadership had been a major factor in the success of the elementary schools, defused the issue by placing it in proper perspective before a meeting of civilian school officials:

> notwithstanding all of the advantages which ... there are in civilian operation of elementary training, it is necessary to remember that the final responsibility for this training and for the quality of the training, rests upon the Service. They are the final arbiters and it is the Service which must be responsible to the Government for the quality of the product.[59]

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* Seymour had been awarded the McKee Trophy in 1939 for preparing the flying clubs to train pilots for the RCAF and in 1943 was made an Officer of the Order of the British Empire. Seymour biographical file, DHist.

Contrary to the worst fears of the managers the air force policy led to no serious disruption in the organization of the elementary schools. The main difference was that the RCAF extended its degree of control over the instructional staff. The supervisory officer, an air force officer of flight lieutenant rank previously in charge of instruction at elementary schools, was replaced by a wing commander in the appointment of chief flying instructor. In theory the civilian managers continued to be responsible for the organization and operation of their schools and were invested with authority over both civilians and military personnel. But aware that they could not exercise this authority in the full sense, most of them prudently shared it with their chief flying instructor.[60]

In contrast to the elementary schools the service flying schools were completely controlled and operated by the RCAF. Structurally they consisted of three wings or sections, a headquarters or administrative wing, a maintenance wing with servicing, salvage and repair facilities, and a training wing. At the outset the training wing was made up of two squadrons one being responsible for intermediate training and one for advanced. In 1940 intermediate and advanced training were combined as one programme and in place of two squadrons there were six training flights each of which retained its pupils from arrival to graduation.[61] In the beginning the service schools had facilities for 168 pupils but plans to expand them to a capacity of 240 were completed in 1942. Every three weeks each school opened its doors to a new group of about 60 pupils. They were divided between two of the six flights and continued in training for nine weeks. As the new students generally arrived just before the senior course had completed its final testing programme there were usually four courses being funnelled through every school at any given time — three under instruction and one being tested.[62]

The number of service schools increased from thirteen authorized by the BCATP Agreement in 1939 to a total of twenty-nine in 1943. Each was equipped with a main aerodrome having three hard surfaced runways laid out in triangular form and two relief fields used mainly for "circuits and bumps" i.e. practice landings and take-offs. Most of the schools were located in the prairie region where the terrain favoured the economical construction of airfields, climatic conditions offered long periods of good flying weather and the wide-open spaces provided ideal practice areas for novices. Seven schools were formed in Alberta, seven in Saskatchewan*, and five in Manitoba. Administratively they were distributed between No. 2 Training Command centered in Winnipeg and No. 3 whose headquarters, at first in Regina, was relocated in Calgary in October 1941. Over the years about 35,000 pilots won their wings at the western schools.[63] In the words of one of the graduates they formed "a great wartime brotherhood" and often recalled the highlights of their training experience.

> ... whenever one travels in Canada, Britain, Australia or other parts of the world, it is always possible to meet up with someone ... who is sure to remember ... the nights that he spent in the Cave (Night Club) in Winnipeg, the Trianon in Regina or the Palliser in Calgary. He, too, will have his own story of how he flew under the bridges on the North Saskatchewan, or looped an Anson, or the day he force landed on the highway south of Assiniboine.[64]

At the end of elementary training, students were divided into two groups. Those recommended as potential fighter pilots, were posted to a service school equipped with Harvards while the other, oriented towards bomber, coastal, or transport operations would move on to twin-engine schools and learn to fly Ansons, Cranes, or Oxfords. Personal preference was taken into consideration in making the selection but as most students, inspired by Canadian aces of the First World War and the heroes of the Battle of Britain, opted for the fighter role, service requirements became the overriding determinant. In 1940 and 1941 when Harvards were relatively plentiful and Ansons were scarce, more pilots were necessarily trained on the single-engine types but owing to the need for bomber pilots some had to be retrained later at operational training units in the United Kingdom. The imbalance in output was gradually corrected in 1942 when Canadian-built Ansons began to roll off the production line. Of the twenty-nine service schools in operation in 1943, twenty were twin-engine schools.

Arrival at a service flying training school was another memorable mile-stone for pilot trainees. The new aircraft, whether single-engine or twin-engine was a giant step up from the elementary trainer. The greater size of the service schools was also impressive. As Len Morgan remembered it, No. 9 EFTS at St. Catharines had been "a quiet little grass field with one small hangar..." but No. 14 SFTS at Aylmer "boasted a long line of (six) steel hangars, concrete runways and a sprawling camp area."[65] The trainees also experienced some noticeable changes in their daily routine. Life in the relaxed civilian atmosphere of the elementary schools had been "almost ideal," free from drills "and continued parade ground discipline.... The food was fine and there was always pleasant young female help in the mess halls."[66] The service schools on the other hand "were strictly air force and all business."[67] They seemed to be alive with "Flight Sergeants always on the look-out for a student pilot in need of a haircut, having his hands in his pockets or sneaking into the mess minus his hat or with his tunic undone."[68]

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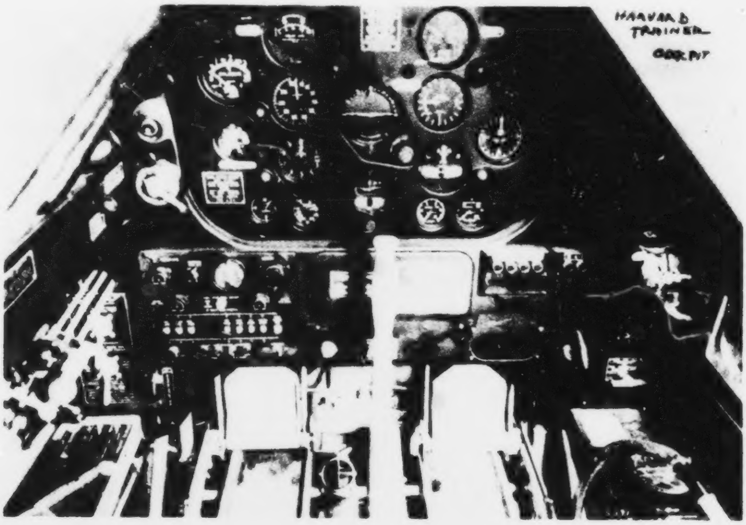
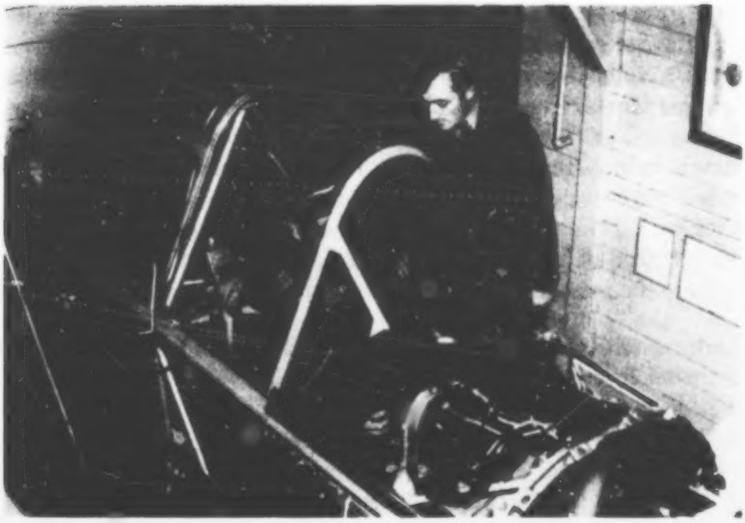
* See B. Greenhous et N. Hillmer, "The Impact of the British Commonwealth Air Training Plan on Western Canada: Some Saskatchewan Case Studies", *Journal of Canadian Studies*, XVI, Fall-Winter 1981, 133-144.

In spite of these petty grievances the trainees quickly adjusted to the air force environment, giving their undivided attention to the challenge of learning to fly their new machines. Morgan's class was probably typical. At their first opportunity they made their way to the hangar line where they examined their new "steeds" with the excitement of newly-acquired professional interest, tinged with bewilderment and respect. "Compared to the cloth-covered Fleet the Harvard looked massive, rugged, heavy, complex."



A Harvard cockpit; to the uninitiated "a hopeless collection of black faced dials and toggle switches." But having mastered the Harvard a pilot would feel at home in most every fighter aircraft for he would find the same instruments in the same place. (PMR 74-259)



Cockpit drill training, No. 34 SFTS, Medicine Hat, December 1943.
(PMR 81-138)

> Climbing up on the left wing we peered into the open front cockpit and caught our breath. The wide spaces on each side of the aluminium seat were crammed with handles, wheels and levers of all shapes, sizes and mysterious uses. The broad instrument panel contained a hopeless confusion of black-faced dials and toggle switches. More handles protruded from beneath the instruments and between the big rudder pedals.[69]

Were they supposed to watch all these instruments and fly at the same time? After only fifty hours on the tiny Fleet biplane could they handle this "tremendous 600 horsepower Pratt and Whitney (engine)?"[70]

At the elementary level the flying course had consisted of twenty-six clearly-defined steps or sequences which began in the cockpit of a stationary aircraft and ended about seven weeks later with exercises in formation flying.[71] Some of the steps, such as taking-off and landing, were taught progressively and over-lapped with other parts of the course. At service schools this pattern of instruction was repeated. In learning to fly a Harvard, an Anson, Oxford, or Crane, as in learning to fly an elementary trainer, the students began by making themselves familiar with the layout and function of instruments and controls in the cockpit. Before their first solo flight, which came after about four hours of dual instruction, they had to know the pre-take-off drill perfectly and Morgan recalled going over it again and again, "H-T-M-P-C-G-T for hydraulics, trim, mixture, pitch, carburetor heat, gas and throttle ... until we said it in our sleep."[72]

The students soon found out that many of the manoeuvres they had learned on elementary aircraft were performed in basically the same fashion on service aircraft. A few were even easier, but the more powerful engines, more complex controls, and the vital importance of following the correct sequence in cockpit procedures added new dimensions to airmanship. Manoeuvres were repeated again and again until they could be performed smoothly and confidently. Then, after obtaining a certain degree of proficiency, the pilots were given more freedom in practising what they had been taught and were encouraged to get the maximum performance out of their machines or in Morgan's words "wring the ships out" until they felt "at home in any aerial situation." Although they were under strict orders as to what they could or could not do, and subject to discipline and perhaps dismissal for disregarding instructions, this did not always prevent heady teenagers from exceeding the bounds of their freedom. Aerial dog-fighting, for instance, was forbidden but "there was no sport like it." On one occasion Morgan and a classmate, sent up to practice standard manoeuvres, chased each other about the sky pressing imaginary firing buttons as they came in for the kill, "I was McCudden, he was von Richthofen." The game quickly came to an end when another Harvard, with an instructor aboard, suddenly appeared on the scene.[73] There were other incidents too. "More than one honeymooning couple standing on the International Bridge at Niagara Falls was unnerved by the sudden sight of a Fleet or Harvard or even a rattling old Anson roaring beneath their feet and disappearing into the dusk...."[74] Commercial aircraft were occasionally "jumped" by Harvards and once in a while, whether by accident or otherwise, trainees wandered across the international border. One student from Aylmer "dropped in at Detroit's busy airline terminal, enjoyed a leasurely cup of coffee and was gone before anyone realized who he was."[75]

A.M. Pennie, who trained on Harvards at No. 37 SFTS at Calgary recalled experiences not unlike those related by Morgan: "...

we gained confidence and experience with each flight... and we all added our own frills and specialties to set manoeuvres...."[76] This was quite within regulations as instructors were told not to be overly dogmatic about the performance of certain manoeuvres: "the great thing is for the pilot to try it out for himself, and he may do it very well with some slightly different control movements."[77] This teaching apparently grew out of the Battle of Britain and was intended to develop resourcefulness in combat.[78] Recalling some of the variations, however, Pennie wrote that "they even terrify me now," particularly "the vivid memories of the anxious moments I spent pulling a Harvard out of a rather prolonged loop."[79]

Murray Peden of Winnipeg, who learned to fly at No. 5 EFTS at High River, Alta. and won his wings on Cessna Cranes at No. 10 SFTS at Dauphin, Man., provides additional insights into the demands of the flying training programme in his wartime memoirs *A Thousand Shall Fall*.

> The switch from Tiger Moths to Cessna Cranes was a big bite for us to digest .... For ... the Cessna was a twin, powered by two Jacobs L4MB engines, and hence a much heavier and more powerful aircraft .... it was ... more sophisticated ... all round and the instrument panel reflected the change. Oil pressure gauges now came in pairs, so did oil temperature gauges, tachometers and cylinder head temperature gauges ...."[80]

Although the sequence of training at the service level was much the same as in elementary training Peden explains that the syllabus was much more advanced:

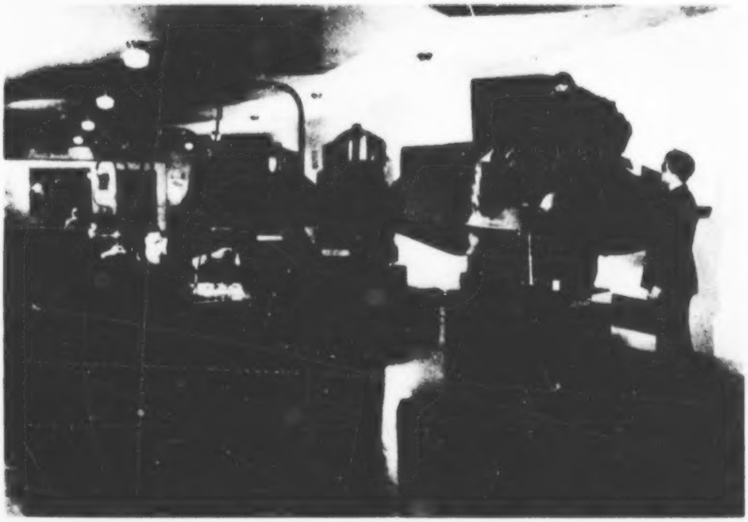
> At SFTS the emphasis ... lay on cross-country navigational flights, instrument flying and reconnaissance missions on which we were expected to make sketch maps ... outlining ... road networks and the location of bridges, railway yards, refineries and water towers .... Our course also prescribed formation flying ... and simulated bombing runs over a camera obscura. Night flying ... was to be given much more prominence than at EFTS .... The whole flying curriculum had a markedly more advanced and professional stamp to it .... and ... a good deal more responsibility and maturity would be expected of us in the air ...."[81]

One of the most demanding parts of the service flying training course was instrument flying, the art of controlling an aircraft solely by use of instruments without any reference to the landscape. On operations pilots did at least half their flying in conditions of poor visibility or at night, when visual flying was impos-

Anson I's of No. 7 SFTS at Fort Macleod, Alta. flying in formation near the Canadian Rocky Mountain Range. (PMR 74-259)

sible or unsafe, and they were expected to be able to fly by instruments just as well as they could by visual reference. Consequently, at EFTS, and again in service flying, pupils were required to perform all aircraft manoeuvres by the use of instruments alone as well as by the rules of visual flight. The list of instruments in most elementary trainers included an airspeed indicator, altimeter, needle and ball or turn and side-slip indicator, and magnetic compass. Flying with the cockpit darkened by means of an opaque hood or wearing specially-coloured goggles, the students gradually learned to trust their instruments. By the time that they graduated from elementary school much of their fear and apprehension about instrument flying, and the natural tendency to be guided by the feel of the aircraft rather than by what the instruments told them, had been overcome. According to Morgan particular emphasis was given to the use of instruments during spinning:

> the word from England was that combat pilots were spinning out of the perpetual winter overcast and dying simply because there was not room below the clouds for recovery (by visual flight). We spun Fleets from the first... and when we had mastered this they put us under the hood in the back seat and made us pull out with needle, ball and airspeed.... At Aylmer (on Harvards) it was the same — dual spins visual contact and under the hood....[82]



Preparing for a flight in the Link Trainer, No. 19 EFTS. (PMR 81-213)

To achieve the required degree of proficiency training in the air was supplemented by ground lectures and practice in the Link Trainer. The time spent in the Link increased from five hours in May 1940, to ten at the end of the year, twenty hours in 1941 and twenty-five in 1943. At No. 5 SFTS at Brantford, flying Ansons, Richard Gentil was emphatically told

> that unless I could use them (instruments) really well, I would never last the war.... Refusing to be beaten, I haunted the Link Trainer room, and must have put up a record number of hours.... Before long I became very good at it....[83]

As aircraft commander on operations it would be necessary for pilots to have some understanding of the duties of other members of the crew. But the training aircraft that they flew were completely unarmed, and so pilot instruction in bombing and gunnery was largely theoretical. To add a touch of realism, night cross-country flights, on which student pilots took their turn as navigator and air bomber, often ended with a simulated bombing run over a camera obscura, a small hut with a telescopic lens and reflecting mirrors mounted in the roof. A light flashed from the aircraft simulated the dropping of the bombs and projected a round image on a screen inside the darkened hut enabling an instructor to assess the accuracy of the bombing.* Two other training aids used in classroom situations were the camera gun and the bombing teacher. The former, which "shot" pictures instead of bullets was used to practice the art of deflection shooting. As the image of an aircraft was flashed on a screen sweeping towards him at an angle, the student had to identify it as friend or foe and, if an enemy, pull the trigger of the camera gun at what he thought was the right moment. The photograph he took would reveal the accuracy of his shooting.

The bombing teacher was an ingenious device which placed the learner in the total operational situation. It consisted of a two storey tower with a raised platform where the pilot sat at the controls of an aircraft mock-up complete with all appropriate instruments. Below him, on a horizontal screen, stretched a landscape of enemy territory. At the touch of a button the instructor could set a film projector in motion creating an imitation of flight. A target was then pointed out to the student and he was told to make his bombing run, set the bombsight and release the "bombs." From a control panel the instructor was able to determine how accurately the exercise was carried out and demonstrate the student's mistakes.[84] Training aids such as the camera gun and the bombing teacher were not widely used in Canada until 1943. How successful they were is not easy to determine but, like the Link Trainer, they enabled the students to get hundreds of hours of training at relatively low cost. In the hands of a capable instructor they helped the student to make the ultimate transition from the theoretical to the practical and get an insight into the whole operational picture.

It was hardly to be expected that the operational training units in the United Kingdom, whose job it was to prepare the BCATP graduates for operational flying, would be completely satisfied with the Canadian-trained pilots. On the whole they found little fault with their general flying ability but from time to time observed weaknesses in areas such as formation flying, aircraft recognition, and radio procedures. These criticisms were noted at the Air Ministry and recommendations to correct them were written into the syllabus.[85] In this way the gap between what a pilot was taught in Canada and what was expected of him overseas was continually being narrowed but was never fully overcome. In instrument flying, for example, a pilot trained on the Canadian prairie would have little experience in flying completely enveloped in cloud or fog. Yet this was a condition which frequently prevailed in the United Kingdom, on operations over Europe, and in the coastal regions of Canada. Newly trained pilots had to adjust quickly.

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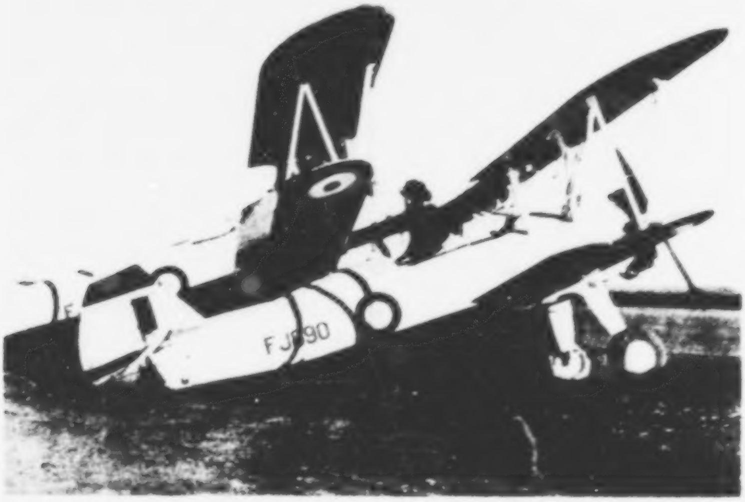
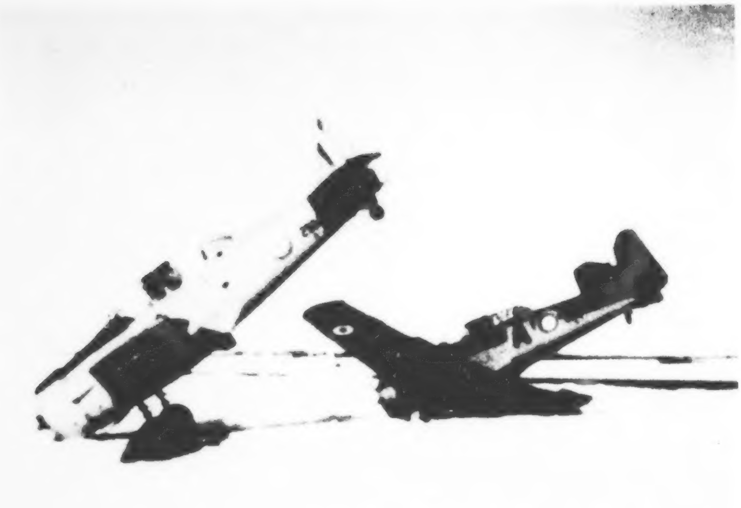
* The camera obcura was also used as a training aid in the First World War. See Wise, *Canadian Airmen and the First World War*, 102.

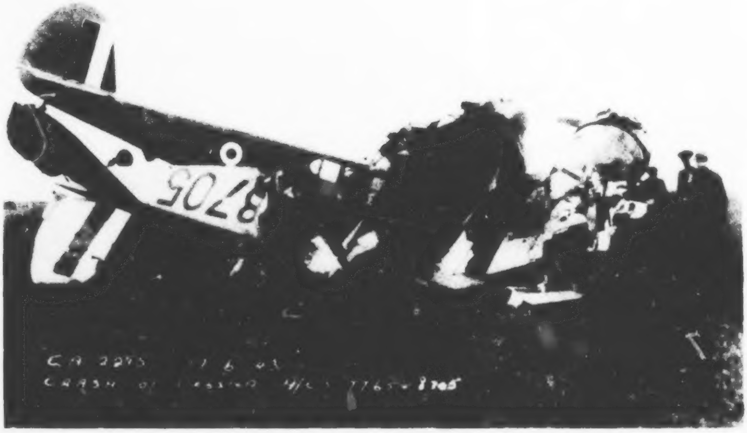
In a massive training scheme such as the BCATP accidents were bound to occur. In the first class of pilots at No. 1 Service Flying Training School at Camp Borden sixteen pupils were involved in mishaps. Fourteen escaped with nothing more than a few scratches or a severe shaking-up but two trainees were fatally injured.[86] Casualties continued to take their toll and by the time the BCATP had come to an end 856 aircrew trainees had been killed or seriously injured.[87] Many of the fatal accidents were the result of escapades by pilots whose skill did not quite match their



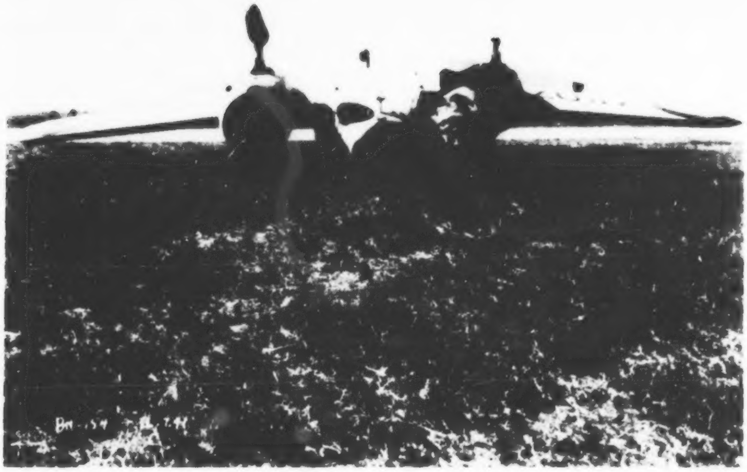
With many machines in the air students and instructors had to keep a sharp lookout to avoid accidents like this collision of two Stearman trainers at No. 32 EFTS, Bowden, Alta. The Stearman, used by the British Flying Training Schools in the United States, was an open cockpit plane totally unsuited for winter flying but about 300 were used for the transferred RAF schools; most were returned unused to the USAAF. (PMR 77-12)



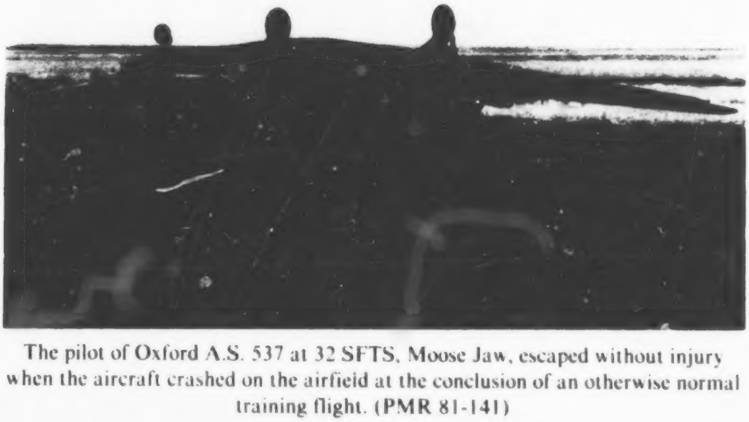
The North American Harvard, used for training fighter pilots, had a pronounced tendency to swing out of control on landing. Before they learned how to land the machine properly many student pilots ended up in an embarrassing position off the runway as did these two novices at No. 9 SFTS at Summerside, P.E.I. The snow didn't help. (PMR 76-598)



These two Cessna Cranes crashed before either one got airborne. Both aircraft were total write-off's but no injuries were sustained by either of the two student flyers one of whom swerved off his own runway into the path of the other. No. 3 SFTS, Calgary, 17 June, 1943. (PMR 81-139)



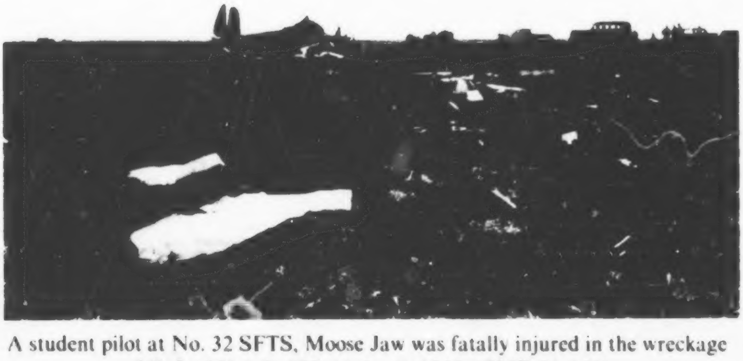
One of the most promising students of Course 31 at No. 12 SFTS, Brandon, ground looped this Cessna Crane and turned it over. Fortunately, he was uninjured. (PMR 81-153)



The pilot of Oxford A.S. 537 at 32 SFTS, Moose Jaw, escaped without injury when the aircraft crashed on the airfield at the conclusion of an otherwise normal training flight. (PMR 81-141)

KEEP OFF THE GRASS

Staff and students march in the funeral parade of two student pilots killed on 13 September, 1941 in the first serious accident at No. 12 SFTS, Brandon. (PMR 81-140)



A student pilot at No. 32 SFTS, Moose Jaw was fatally injured in the wreckage of Oxford II A.S. 930, 11 April, 1943. (PMR 81-146) daring. Unauthorized low flying was the most common of such practices and one which woeful example, lectures, and court martials were unable to curb completely. During 1941, 170 training fatalities were reported, forty of which were caused by low aerobatics and low flying. Thirty-seven resulted from aircraft stalling, thirty-one occured during night-flying exercises, twenty came about through air collisions, fifteen were connected with faulty instruments and propellors, and twenty-seven were attributed to miscellaneous causes.[88]

In 1942 the introduction of a new and more effective programme of accident prevention, including a stricter code of air discipline and a more thorough method of accident investigation, brought about a decline in the accident rate. During the first year of the BCATP one fatal accident had occurred for each 11,156 hours of flying time; in the last year, the rate was halved.[89]

Minor accidents accounted for more than fifty percent of the total and while they seldom resulted in serious injury they were expensive and annoying to the authorities. Some aircraft bore witness to this state of affairs. For example, Tiger Moth serial number 4080 at No. 5 Elementary Flying Training School at High River had one of its ailerons damaged in a taxiing misadventure late in 1940 after it had been in use for one hundred and fifty-eight hours. On 3 January 1941 it was again damaged when a student brought it in for a hard landing. It was soon back in service but in April a trainee ran the machine into a barrier damaging the propellor. In July, "4080" experienced another bad landing in which the undercarriage was almost wiped off. It was again repaired and flown without mishap until the spring of 1943 when it was replaced by a Cornell. During its time in service the Tiger Moth had flown a total of 2,359 training hours, used up 16,000 gallons of gasoline, and had carried at least 200 different pilots none of whom had been injured.[90]

By and large the pilot graduates of the BCATP were carefully selected and well trained. Inevitably, some who were anxious to win a flying badge but were lacking in aptitude were taken into the training stream and in the early days of the war the urgent demand for pilots meant that some were sent overseas with too few hours in their logbook. Yet, in spite of these problems, and others presented by the mass production of pilots and the need to meet quotas and deadlines, high standards of flying training which demanded much from pupils and instructors were established from the beginning and maintained at the many schools of the BCATP. Although there was a general complaint in the RCAF that the quality of recruits declined as the war went on, this contention would be difficult to prove one way or another. What can be said with certainty, however, is that the quality of instruction, though there were some ups and downs, continued to improve. At the Central Flying School at Trenton and also at the three flying instructors' schools the subject of flying instruction was under constant review with considerable progress being made in the standardization of training and testing — particularly in the closing months of the BCATP. The results of the research and experiments conducted at CFS formed the basis of the post-war training programme and together with the overall success of the BCATP earned the RCAF a lasting reputation for the soundness of its flying training methods.

References — Chapter 7

1 Anonymous, *Contact Trenton: Official Organ of the Royal Canadian Air Force Station, Trenton, Ontario*, 1 Feb. 1942, 25, Permanent Reference File, Central Flying School, DHist. Generally attributed to an unknown student instructor at the Central Flying School, Trenton.

2 *Notes on the History of RAF Training, 1939-44*, 188; Hitchins, *Air Board*, 166, 185, 225.

3 F.H. Hitchins , "Central Flying School," PRF, Central Flying School, DHist.

4 Daily Diary, Central Flying School, 31 Dec. 1941, 31 July 1942, DHist.

5 "British Commonwealth Air Training Plan, Flying Training," Section Two, Part Three, Instructors, DHist 181.009 (D89A); Daily Diaries, 1, 2 and 3 FIS, DHist.

6 Interview with G/C P.Y. Davoud, 18 May 1977, Davoud biographical file, DHist.

7 Progress Report Nos 34 and 35 by CAS, 19 Oct. and 16 Nov. 1942, DHist 73/1558, VI.

8 Daily Diary, Central Flying School, various entries, DHist.

9 "British Commonwealth Air Training Plan, Flying Training," Service Flying Training Schools, Part Two, Organization, DHist 181.009 (D89A).

10 Progress Report No 29 by CAS, 11 May 1942, DHist 73/1558, V; Minutes of the Supervisory Board, 18 Oct. 1943, app III, DHist 73/1558, VIII.

11 Bannock biographical file, DHist.

12 Minutes of Meeting of the Supervisory Board, 18 Oct. and 15 Nov. 1943, app III, DHist 73/1558, VIII; Hugh A. Halliday, "Tempest Tiger, S/L David C. Fairbanks, DFC & 2 Bars," *CAHS Journal*, XV (Summer 1977), 50-54.

13 Progress Report No 45 by CAS, 20 Sept. 1943, DHist 73/1558, VII.

14 J. McKay Hitsman, "Manpower Problems of the Royal Canadian Air Force during the Second World War," (Army Historical Section, Report No 67, 15 Jan. 1954), 23.

15 Bannock biographical file, DHist.

16 DHist 74/7, I, 130, 188-189.

17 "Selection of Personnel," DHist 74/7, III, 653-992.

18 "Recruitment for Preparatory Training," *ibid.*

19 "Selection of Personnel," *ibid*, 675, Progress Report No 40 by CAS, 19 Apr. 1943, DHist 73/1558, VII.

20 "Selection of Personnel," DHist 74/7, III, 656-662.

21 "Manning Depots," DHist 74/7, IV, 827.

22 Daily Diary, 1 ITS, 1 May 1940, DHist; Daily Diary, 1 SFTS, 4 Nov. 1940, DHist.

23 "British Commonwealth Air Training Plan, Flying Training," Initial Training Schools, DHist 181.009 (D89A).

24 Progress Report No 9 by CAS, 9 Sept. 1940, DHist 73/1558, II.

25 Progress Report No 23 by CAS, 0 Nov. 1941, DHist 73/1558, IV.

25a Extract from: Jean Pariseau, *Albertaines Images* (Edmonton: La Survivance, 1978). An adaptation follows:

MY FIRST FLIGHT

Did the first aeroplane that I ever saw
come from outer space? Was it on a special mission?
I still do not know.
But what I do know without a doubt
Is that this veteran of the First World War
Captured my imagination
I was only six years old. It was certainly twelve

Although the noise it made led me to believe that
it was much older,
And its aerobatics confirmed to me that it had been sent
by a strange godess
Who lived in the skies.

But when the possibility that peace might be preserved
Disappeared, especially after Munich — as ironic as it may seem —
I came to believe that my chances
To move my body around in the blue sky
And the clouds had also vanished.
I had to wait until I was eighteen
— That magic number which allows adolescents to do anything
they wish;
By then I had completed high school —
Before enrolling as a student-pilot
In the air force.

An army without discipline would soon be wiped out,
So one has to learn to obey and to walk
the straight line.
A pilot without the knowledge of mechanics
and navigation
Would likewise be left out of the competition
And would not be worthy of carrying the torch
against the enemy.
So he must learn, at least for a short while,
How to mark maps, change pistons, read the weather.
God, what a long wait!

Then, on a cold and sunny autumn morning
My long-awaited dream to fly comes true.
I harness on a parachute and board a monoplane
Where an instructor, sitting as a lord,
Controls the aircraft.
We take-off as a whirlwind
When suddenly a thousand vibrations
As if by magic stop
And confusion gives way to pure joy
For I am now master of the air.
We climb up to a cloud
And say hello to it in passing.

And we complete the circuit at a thousand feet
As per regulations
Believing that we would wish to do nothing else in the world,
Then, heading into the wind, we ease up on the throttle
And lower the nose.
We land very gently. 'Tis done my boy! Later I flew solo and carried out
acrobatics
But no single flight has remained imprinted
In my mind as this first one.
Why? Simply because this was also
My first conquest.

26 Murray Peden, *A Thousand Shall Fall* (Stittsville, Ont.: Canada's Wings, 1979), 36.

27 "British Commonwealth Air Training Plan, Flying Training," Part Two, Section Two, The Elementary Flying Training Schools, Chapter Three, Syllabus of Instruction, DHist 181.009 (D89A).

28 *Ibid.*

29 Richard Gentil, *Trained to Intrude* (London: Bachman & Turner, 1974), 48; Len Morgan, *The AT-6 Harvard* (Famous Aircraft Series; New York: Arco 1965), np.

30 Progress Report No 64 by CAS, 16 Apr. 1945, DHist 73/1558, X; "British Commonwealth Air Training Plan, Flying Training," Part Two, Section Two, The Elementary Flying Training Schools – Statistical Summary, DHist 181.009 (D89A).

31 Leckie to AOC No 2 Air Training Command, 19 Sept. 1940, quoted in Hitsman, "Manpower Problems," 43.

32 Leckie to No 1 Training Command, 20 Jan. 1941, *ibid.*

33 Interview with Senator Godfrey, Godfrey biographical file, DHist.

34 "British Commonwealth Air Training Plan, Flying Training," Chapter II, The Civilian Operated Schools, app A; *ibid*, Chapter VII, The Grading School Programme; *ibid*, Section Two, Service Flying Training, Part One, Introduction, Service Schools under the BCATP, DHist 181.009 (D89A).

35 *Ibid; Minutes of Meeting of the Supervisory Board, 23 Aug. 1943, DHist 73/1558, VII.*

36 Training Command Instructions, signed by AVM G.R. Howsam, AOC No 4 Training Command, Sept. 1943, DHist 181.009 (D6502).

37 *Ibid.*

38 Progress Report No 52 by CAS, 17 Apr. 1944, DHist 73/1558, VIII.

39 Progress Report No 64 by CAS, 16 Apr. 1945, DHist 73/1558, X; Craven and Cate, *Men and Planes*, 578.

40 *Ibid.*

41 Report No 11 by CAS, 11 Nov. 1940, DHist 73/1558, II.

42 Progress Report Nos 23 and 24 by CAS, 10 Nov. and 15 Dec. 1941, *ibid*, IV.

43 Progress Report Nos 25 and 30 by CAS, 19 Jan. and 15 June 1942, *ibid*, V.

44 Progress Report Nos 31, 36, and 39 by CAS, 20 July 1942, 21 Dec. 1942, and 15 March 1943, *ibid*, VI and VII; "History of Civilian Schools," DHist 181.009(D3).

45 *Notes on the History of RAF Training, 1939-44*, 137 and app 7. The British were permitted to retain four civilian operated schools in the United States, each with a capacity of some 200 pupils and also to continue a programme of training air observers with the United States Navy Air Service.

46 Progress Report No 39 by CAS, 15 March 1943, DHist 73/1558, VII.

47 *Ibid*, No 43, by CAS, 19 July 1943.

48 Canadian Flying Clubs Association, Annual Report for the year 1940, DHist 75/252, I.

49 Daily Diaries, 1 EFTS, 29 June 1942, and 31 EFTS 13 July 1942, DHist.

50 Pattison to DHist, 5 December 1974, DHist 75/252, V.

51 Minutes of Meeting of the Supervisory Board, 15 June 1942, DHist 73/1558, V.

52 Canada, House of Commons, *Report (No. 1) of Subcommittee No. 1, 3 November 1941*.

53 *Ibid*.

54 *Ibid*.

55 "History of Civilian Flying Schools," DHist 181.009 (D3).

56 "British Commonwealth Air Training Plan, Flying Training," The Elementary Flying Training Schools, Chapter V, Instructor Policy, DHist 181.009 (D89A).

57 *Ibid*.

58 *Ibid*.

59 Minutes of a meeting of School Vice-Presidents held at the Chateau Laurier, Ottawa, 7-8 Oct. 1942, Royal Canadian Flying Clubs Association.

60 "British Commonwealth Air Training Plan, Flying Training," The Elementary Flying Training Schools, Chapter V, Instructor Policy, DHist 181.009 (D89A).

61 "British Commonwealth Air Training Plan, Flying Training," Section Two, Service Flying Training, Part Two, Organization and Administration, DHist 181.009 (D89A); Progress Report No 20 by CAS, 11 Aug. 1941, DHist 73/1558, IV.

62 Progress Report Nos 9, 17, 21, and 27 by CAS, 2 Sept. 1940, 12 May 1941, 15 Sept. 1941, and 16 March 1942, *ibid*, II-V.

63 "British Commonwealth Air Training Plan, Flying Training," Section Two, Service Flying Training Schools, DHist 181.009 (D89A).

64 A.M. Pennie, "Memories of the Training Plan, an affectionate look back at a memorable Chapter in Canadian aviation history (Part Two)." *Flight* (Sept. — Oct. 1971), 13-14.

65 Morgan, *Harvard*.

66 Pennie, "Memories of the Training Plan (Part One)," *Flight* (July-Aug. 1971), 25.

67 Morgan, *Harvard*.

68 Pennie, "Memories of the Training Plan (Part Two)," 12.

69 Morgan, *Harvard*.

70 *Ibid*.

71 Great Britain, Air Ministry, Department of the Air Member for Training, *Instructor's Handbook of Elementary Flying Training* (London: HM SO, 1942), *passim*.

72 Morgan, *Harvard*.

73 *Ibid*.

74 *Ibid*.

75 *Ibid*.

76 Pennie, "Memories of the Training Plan (Part Two)," 12.

77 Great Britain, Air Ministry, Department of the Air Member for Training, *Instructor's Handbook of Advanced Flying Training* (London: HM SO, 1943), 169.

78 Morgan, *Harvard*.

79 Pennie, "Memories of the Training Plan (Part Two)," 12.

80 Peden, *A Thousand Shall Fall*, 66.

81 *Ibid*, 67.

82 Morgan, *Harvard*.

83 Gentil, *Training to Intrude*, 60.

84 Information provided by Mr. J.A. Griffin and Maj J.B. Pariseau.

85 Hall to RCAF Overseas Headquarters, 31 August 1942, Fee to Campbell, 28 Sept. 1942, Ferris to Campbell, 6 Oct. 1942, Ford to RCAF Overseas Headquarters, 19 Oct. 1942, DHist 181.009 (D2746).

86 Daily Diary, 1 SFTS, various entries 22 July to 30 Sept. 1940, DHist.

87 "The British Commonwealth Air Training Plan," DHist 73/1558, X, 55.

88 BCATP Accident Reports, Air Member for Training Division, "Mentioned in Despatches," Jan. 1941, 1-2, DHist 181.009 (D4761).

89 "The British Commonwealth Air Training Plan," DHist 73/1558, X, 55.

90 "30 for 4080," *Flip*, 1 (Feb. 1943), 3-4, Daily Diary, 5 EFTS, DHist; Aircraft Record Cards, Tiger Moth 4080, DHist; John A. Griffin, *Canadian Military Aircraft Serials and Photographs* (Ottawa: Queen's Printer, 1969), 271.

8

The Other Members of the Aircrew Team

(Observers, Navigators, Air Bombers, Wireless Operators, Air Gunners, and Flight Engineers)

> In many respects the air observer has the most responsible and exacting task in a bomber aircraft.... Mentally he must always be on the alert .... He must estimate and plot the course, be able to take snap readings, judge weather conditions, look out for ice and keep alternative objectives and landing grounds in the back of his mind.... He must show a marked ability to handle figures, and be sufficiently skilled in signals to take a portion of work off the wireless operator. Above all he must never make mistakes. In most types of aircraft he has considerable exercise in getting astro sights and taking up a bomb aiming position, and this may involve temporarily disconnecting his oxygen apparatus at a great altitude. Thus his fatigue is great. He is a wise and considerate pilot who appreciates the difficulties of his air observer.[1]

At the start of the war the number of air observers in the air forces of the Commonwealth was nowhere near requirements. The RAF had a mere handful in proportion to its needs and in the air forces of the other Commonwealth countries it would have been difficult to find half a dozen.[2] In the pre-war RCAF, navigation chores on long-range flights were shared between pilot and co-pilot with the co-pilot doing most of the navigating and very little of the flying. There were no non-pilot navigators, or observers as they were known until 1942, and plans to train them were still on paper when the war began.[3]

The BCATP made provision for ten air observer schools which, when fully developed, would be capable of graduating three hundred and forty observers a month, just over four thousand a year. Most of these schools were located on municipal airfields which they usually shared with an elementary flying training school. Their operation was contracted out to commercial aviation companies on much the same terms as the elementary schools were contracted to flying clubs. The RCAF provided the basic facilities and major items of equipment while the companies were responsible for all housekeeping services including snow clearance of runways. They also hired the civilian pilots who chauffered the observer students on their training flights. Responsibility for instruction was retained by the RCAF and all instructors were service personnel.[4]

The first Air Observer School, No. 1 at Malton municipal airport in Toronto (which also housed No. 1 EFTS) was organized by C.R. (Peter) Troup and W. (Babe) Woollett of Dominion Skyways, a bush flying company which operated in northern Quebec. After discussions between various bush operators, air force officers, and civil servants on the organization of these schools, Troup and Woollett were asked to form a subsidiary company, Dominion Skyways Training Limited, to undertake the operation of No. 1 AOS on a non-profit basis. The staff of the commercial company formed the nucleus of the training company and additional personnel were hired and trained as necessary, with salaries and wages based on those in effect in Dominion Skyways at the start of the war. No. 1 AOS was opened on 27 May 1940. It served as a model for the other nine each of which adopted the organization and operation procedures worked out by Troup and Woollett. With the exceptions of No. 4 at London, Ont. which was run by Leavens Brothers Limited of Toronto, and No. 10 at Chatham, NB, contracted to a local group headed by R.H. Bibby, an experienced bush pilot, the other air observer schools were operated by Canadian Pacific Air Lines or its newly acquired subsidiaries.[5]

Instruction for air observers began at an Initial Training School where recruits spent four to six weeks. At ITS they were introduced to the tools of the trade — compasses, sextants, drift recorders, and computers of various kinds. Concepts such as air speed relative to ground speed, track, and drift, were introduced and the principles of plotting were explained. Training was elementary and theoretical, and given to solving textbook problems in navigation.[6]

At AOS the trainees' most challenging task was to master the art of dead reckoning — a combination of careful calculations,

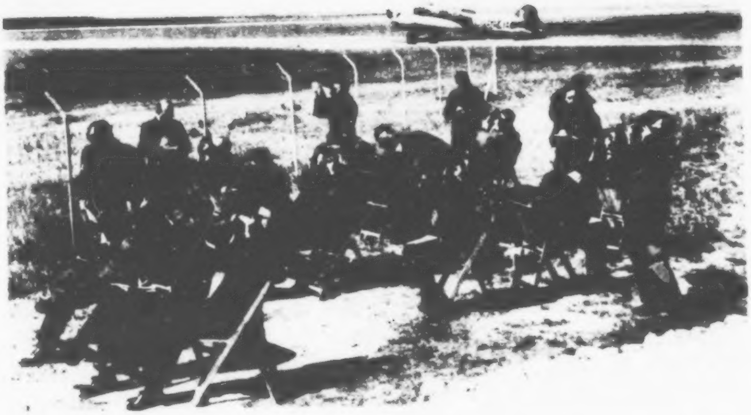
A.O.S. MANAGERS
ABBOTSFORD 1943
PHOTO
#9EFTS

Some civilian managers of the air observer schools all former bush pilots. From left to right: C.R. Leavens, No. 4 AOS, London; W.A. McLeod, No. 1 Malton; G. Apedaile, financial adviser for civilian schools; C.R. Troup, general superintendent of AOS's; Group Captain N.E. Sharpe, Air Force Headquarters; W. Woollett, No. 9, St Jean, Que; D.S. Ormond, No. 5 Winnipeg; W.L. Paar, No. 7, Portage la Prairie, Man. (PMR 75-371) F. Pattison photo.

accurate measurement, and rules of thumb by which a navigator, without the use of any external aid, could determine the position of an aircraft in flight and plot its course from point to point. The work began with simple plotting exercises and became progressively more difficult as the multiple effects of contrary cross-winds and varying altitudes were taken into consideration. Problems were at first solved by long and laborious methods of calculation; then came the use of such labour-saving devices as navigation computers, position graphs, tables and charts, all designed to provide a speedy solution to most of the problems encountered in flight providing, of course, that the variables of air speed, altitude, compass bearing, and wind speed and direction had been accurately measured and properly applied. When the embryo observers had a thorough grounding in the art of dead reckoning they went on to consider more advanced navigational practices using direction-finding radio and astro observations. But these were taught as aids to dead reckoning and not as substitutes for it. They were necessary as a check against errors in calculation but on operations a navigator could not assume that the stars would always be visible, or that electronic devices would be free from enemy interference. Despite the development of various technical aids to navigation, dead reckoning remained the basis of the navigator's training and his work.

During the twelve weeks at AOS each pupil logged some sixty or seventy hours in the air. The flights began with simple map-reading sessions in which the tyros learned to identify features on the ground and developed skill in estimating distances and calculating bearings. The determination of wind velocity, drift, and ground speed were gradually worked into these exercises. In time the trainees were made responsible for keeping the aircraft on track. They plotted the course, checked their calculations by radio and astro "fixes," and gave the pilot the directions to steer by. Pre-flight briefings, including route, weather, and final objective were conducted as they would be on operations. To make things more

Air observer trainees at Malton, Ont. receive a final briefing before taking off on a navigation exercise. The Ansons, although cold in winter could be uncomfortably hot in summer which probably explains why the trainees were dressed so casually and why an Australian member of the group chose to wear shorts.
(PL 1078)



New Zealand air observers practice taking sun shots at the Central Navigation School, Rivers, Man. (2C-22)

realistic a new set of instructions was sometimes introduced after the pupils became airborne which meant that all the computation had to be reworked in a hurry.[7]

There was no pass or fail mark on air exercises as there was in classroom work. What counted in the air was how well a student could perform, how fine a balance he could strike between speed and accuracy without sacrificing too much of either. It was one thing to compute and plot in the comfort and quiet of the classroom but quite another to put forth a good mental effort in the cramped and uncomfortable quarters of a military aircraft, where one had to contend with the fatiguing effects of cold, nausea, and engine noise. Indeed, some recruits who could speedily and accurately work out the most complicated navigation problems on the ground, found that computation in flight was too much of a strain.[8]

The pilots who flew the aircraft used for navigation practice flights deserve more than passing mention. They were not instructors yet they had to report on the work and attitude of the pupils during flight. To qualify for their job they had to have a sound knowledge of navigation, or else a strong homing instinct, and more than an ordinary amount of patience. Their orders were to fly the course given to them by the trainees even though the latter might be obviously in error. If the novices got hopelessly lost, as they sometimes did, it was up to the pilot to get aircraft and crew back to base. At the end of the flight, and before the pupils left the aircraft, their logs were passed to the instructor or, in his absence, to the pilot who added his own comments on each student's performance.[9]

The non-navigational subjects on the air observer's curriculum included meteorology, aircraft recognition, current affairs, physical training, and Morse Code in which a sending and receiving proficiency of eight words per minute was required. Training in bombing and gunnery, undertaken at a Bombing and Gunnery School, marked the end of the course for observer trainees. The graduates now received their observer badge, a single wing attached to a distinctive "O". About one third of each class would receive commissions as pilot officers, and two thirds would be promoted to sergeant rank. After a further four weeks of intensive instruction in astro navigation either at No. 1 Air Navigation School at Rivers, Man. or No. 2 at Pennfield Ridge, NB, intended to better qualify them for night navigation, the observers departed for the United Kingdom except for a few held back as instructors or named for duty with the home-based squadrons or Ferry Command.[10]

Because of an administrative oversight the members of the first observer course were not presented with their wings until they had completed the astro navigation course at No. 1 ANS, then located at Trenton. All thirty-seven graduates were detailed for postings overseas and arrived in the United Kingdom on 24 November 1940. Most of them were posted to Bomber Command. By the end of the war more than two thirds of them had been killed, the highest casualty rate suffered by any class of the BCATP.[11]

The training of air observers continued with little change until the beginning of 1942 when a review of bombing operations confirmed that owing to faulty navigation a large percentage of bombs was being dropped wide of the mark. On returning from their missions over enemy territory "Most crews claimed to have bombed the target" recalled A.P. Fawley of North Battleford, Sask., who served as an observer in Bomber Command. They were egged on by debriefing officers, over-anxious to portray a good picture to their superiors, to put aside any doubts they might have and to make their reports as favourable as possible.[12] As time went on more and more such reports were contradicted by aerial photographs which too frequently showed that crews were dropping their bombs miles from the target which they felt had been obliterated.[13]

The turn of the tide in Bomber Command's fortunes coincided with the appointment of Air Marshal Arthur Harris as Commander-in-Chief in February 1942. Realizing that one of the problems was that the air observer was too overworked to give proper attention to navigation, Harris added a new member, an air bomber, to the crews of medium and heavy bombers. As the name implies, the air bomber relieved the observer of the demanding task of visually pin-pointing the target, guiding the pilot onto it, operating the bomb sight and dropping the bombs.[14]

As Harris explained it:

> There was an obvious need to introduce the air bomber .... The navigator had more than enough to do ... to get the aircraft within a few miles of the target, especially when making the run-up .... Apart from all the other difficulties ... the work he had done as a navigator left him no time to get his eyes conditioned to the darkness, which he would have to do before trying to spot the aiming point.[15]

Following this decision the training of specialist navigators in the BCATP began in June 1942 and the training of observers was gradually phased out, coming to an end in October.[16] But it is ironical that the war was nearly half over before the RAF, having committed itself to a night bombing offensive, was fully alive to the need for full-time navigators, unhampered by other duties. The idea that the pilot could find his own way to the target with only a minimum of assistance from other members of the crew died hard.

The syllabus for navigators was similar to the one previously followed by the observers but with the bombing and gunnery portion removed and less emphasis on Morse, which was included in the training of all crew members with the exception of gunners. The course was extended from twelve to twenty weeks allowing for considerably more practice in the air.[17] Training also became more intense. In December the Air Ministry advised that passing standards were to be raised, and borderline students and those afflicted with incurable airsickness were to be weeded out. As a result the attrition rate among student navigators rose from about eleven per cent to seventeen per cent in March 1943 and seldom fell below this figure.[18]

The trend towards specialisation was also reflected in the appearance of two new categories of navigator — navigator bomber and navigator wireless, commonly referred to as navigators "B" and navigators "W". Training for these categories began in November 1942. Navigator "B" candidates took a course of eight weeks at a bombing and gunnery school followed by twelve weeks of navigation training at an AOS, and were qualified as navigators as well as bomb aimers. They were employed on medium bombers, flying boats, and torpedo-carrying aircraft. Navigators "W" were basically wireless operators trained to navigate in fast twin-engine fighters and light bombers such as the de Havilland Mosquito. They were well prepared for this demanding task spending twenty-eight weeks at a wireless school plus another twenty-two weeks at an air observer school to qualify for their navigator's badge.[19]

To meet the increased demand for navigators and air bombers, the air observer schools were enlarged, some being tripled in size. No. 2 AOS at Edmonton was typical of these units. In July 1942 it had a trainee population of just over two hundred; in March 1943 this had risen to almost four hundred and in July of that year, when construction of new accommodation was more or less complete, the pupil strength was six hundred and forty-five. The air force staff of disciplinary personnel and instructors numbered about two hundred but the civilian staff, few of whom were medically fit for military service, was close to one thousand.[20] Since there were ten air observer schools organized in much the same way the saving in military manpower achieved by entrusting their management of to civilian companies was considerable.

The output of observers was augmented by three RAF air navigation schools transferred to this side of the Atlantic in 1940 and 1941: No. 31 at Port Albert, Ont., No. 32 at Charlottetown and No. 33, which eventually absorbed No. 32, at Hamilton. In spite of the confusing difference in name, training at these units was much the same as at air observer schools but, in addition to their training function, they carried on a limited amount of research. For training pilots and navigators who were destined for coastal operations, No. 31 General Reconnaissance School was moved to Canada in January 1941 and located at Charlottetown, adjacent to No. 32 Air Navigation School. A second general reconnaissance school, No. 1, staffed by RCAF personnel, was formed at Summerside, PEI in July 1942. At these units pilots and navigators gained experience in long distance ocean flying. The former as well as the latter flew as passengers and practiced dead reckoning for hours on end.[21]

The Central Navigation School at Rivers, Man., where the generally cloudless skies were ideally suited to the practice of astro-navigation, was the hub of the navigation training programme. It was formed in May 1942 by the amalgation of No. 1 Air Navigation School, moved from Trenton to Rivers in 1940, and No. 2, originally located at Pennfield Ridge, NB. Its chief function was to maintain a uniformly high standard in all schools where navigation was taught. It provided the syllabus and its inspection flights moved from school to school checking on the quality of instruction. Through its link with the Empire Central Navigation School in England it had access to all the latest developments in the knowledge and techniques of aerial navigation[22] — but not necessarily all the latest equipment.

By far the greater part of navigation training at air observer school, approximately seven hundred hours out of a total of nine hundred, was carried on in classroom situations. To introduce an aspect of realism, films and other types of training aids were used. One of the most popular was the dead reckoning trainer which was also used in pilot training. It resembled the navigation compartment of a heavy bomber. Several of these were installed in one room and while the students plotted a hypothetical course the instructor, monitoring the exercise from a control panel, introduced changes in wind direction and velocity simulating conditions frequently encountered in flight. Another such device was the domeshaped celestial navigation trainer in which students could practice plotting a course by the stars.[23]

The aircraft associated with navigation training was the Avro Anson. In Canada most of the training was done on the Anson I and V, though the Mark III and IV (basically the Anson Is modified to take the American Jacobs or Wright Whirlwind engine in place of British Armstrong Siddley Cheetah) were also used. Students had mixed emotions about the Anson I. They found it to be a likeable aeroplane but one of their first duties on every flight was to crank up the manually operated undercarriage — an arduous and unpopular task. They also discovered that star sightings and sun shots had to be taken through an open hatch exposed to the full benefit of an icy blast. In a playful mood a trainee at Malton made original use of the hatch. Scribbling a note to the effect that he would like to make the acquaintance of young ladies in the area he tossed it out to the wind. To his embarrassment the scrap of paper was picked up and appeared in the local press bringing more replies than he cared to answer.[24]

Although the Canadian aviation industry succeeded in getting the Anson II into production in 1942 the output all went to pilot training schools and the navigators struggled along with the ancient Mark Is, IIIs and IVs. In 1943 the Anson V, designed as a navigation trainer, began to appear at a few air observer schools and during 1944 most units were equipped with them. New features included cabin heating, an astrodome fitted with hot air jets, and two navigator's desks each having a complete set of instruments and an adjustable overhead lamp. A third navigator could always find a corner on the Mk V, but on Anson Is not more than two students could be conveniently carried.[25] They were assisted by a wireless operator/air gunner who might still be under training and who was responsible for reporting changes in the direction of velocity of the wind or special instructions transmitted from home base.[26]

Asked what he thought of navigation training in the BCATP, Air Vice-Marshal D.C.T. Bennett, instrumental in the establishment of the trans-Atlantic ferry organization in 1940, founder of the famous Pathfinder Group of Bomber Command, and the foremost authority on navigation in the RAF during the war, replied that "it was very sound but it was training and you cannot duplicate real experience in training."[27] Recalling that some of the newly trained navigators made a trip across the Atlantic in the navigator compartment of a Hudson or other aircraft he remarked that that gave them "one almighty piece of experience."

> Now, such a navigator going to Coastal or Bomber Command was twice as valuable, or more than twice as valuable, as one who had done his navigating under nice prairie conditions in Canada and then crossed to the United Kingdom in a ship.[28]

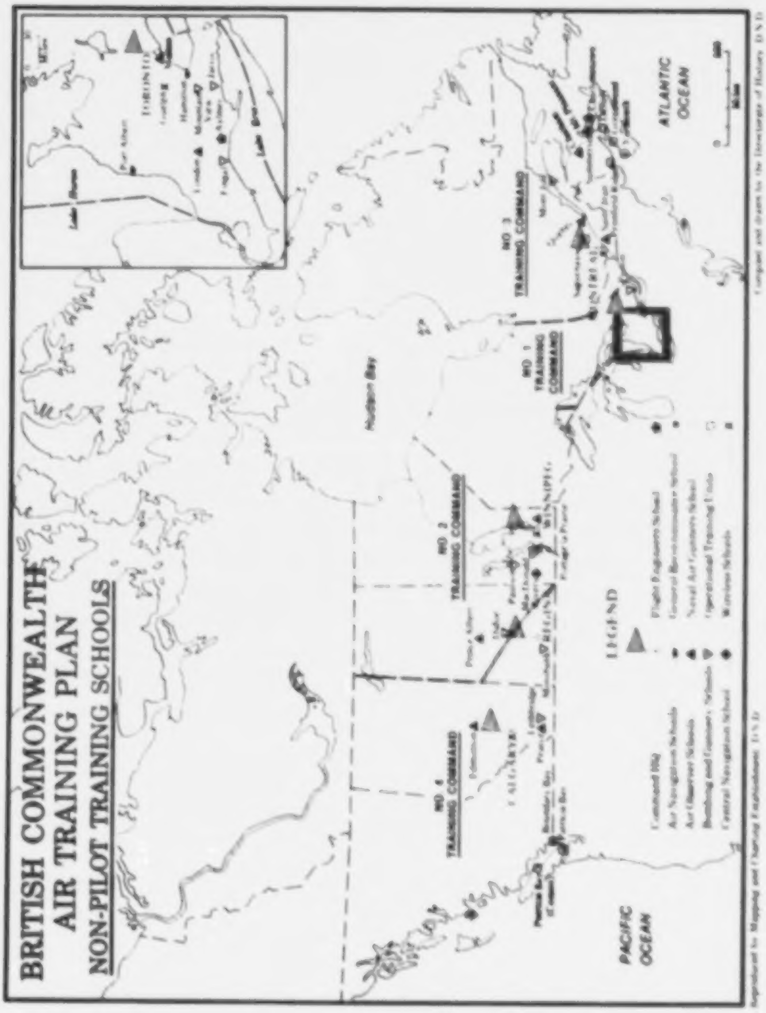
Quite a few of the Canadian-trained navigators wound up in the Pathfinder Group and "we had a lot of training to do with them...." But generally, in Bennett's opinion "the navigators from the schools were basically sound ...."[29]

The course laid out for air bombers was not unlike that formerly given to air observers. After ITS they went to a bombing and gunnery school for eight weeks. This was followed by six weeks at an air observer school where they concentrated on map reading. In the air they flew with navigators, practiced map reading, passed information to the navigator as they would on operations and at the end of each trip were given an opportunity to practice bombing. On operations it was found that eight weeks was not long enough to develop adequate skill in bombing and the time spent at bombing and gunnery school was increased to twelve weeks.[30]

The expansion of air observer schools was parallelled by the construction of additional facilities at bombing and gunnery units to meet the operational demand for more air bombers, navigators "B", wireless operator/air gunners and air gunners. All the existing bombing and gunnery schools were enlarged and a new one, No. 10 at Mount Pleasant, PEI, was opened in September 1943. No. 1 BGS at Jarvis, a good example of these units, had one hundred and thirty pupils in January 1942 and over four hundred a year later. No. 9 BGS at Mont Joli, Qué., the largest, and used exclusively for the training of air gunners, had almost six hundred students in July 1942, a staff of over one thousand service personnel and one hundred and ten aircraft. Eighty-two of these were Fairey Battles, thirteen equipped for drogue towing and sixty-nine fitted with Bristol turrets for air to air firing.[31]

Commencing in 1942 considerable progress continued to be made in the training of air gunners and wireless operator/air gunners. Previously the tuition of these two categories had suffered from inadequately trained instructors and lack of proper equipment. To raise the standard of wireless operator/air gunners, who were increasingly becoming specialists in radio work, their course

BCATP — Non-pilot aircrew training schools


BRITISH COMMONWEALTH
AIR TRAINING PLAN
NON-PILOT TRAINING SCHOOLS
Hudson Bay
NO 1 TRAINING COMMAND
NO 2 TRAINING COMMAND
NO 3 TRAINING COMMAND
NO 4 TRAINING COMMAND
TORONTO
WINNIPEG
REGINA
CALGARY
MONTREAL
PACIFIC OCEAN
ATLANTIC OCEAN
LEGEND
Command HQ
Air Navigation Schools
Air Observer Schools
Bombing and Gunnery Schools
Central Navigation School
Flight Engineers School
General Reconnaissance School
Naval Air Gunners School
Operational Training Units
Wireless Schools

at wireless school was extended from twenty to twenty-eight weeks followed by six weeks of gunnery training. At the same time the air gunners' programme was increased from four to twelve weeks, comprising six weeks of ground training and six weeks of air-firing practice.[32] Although the aircraft used, Battles and Bolingbrokes, were equipped with Bristol turrets instead of the Frazer Nash or Boulton and Paul types used overseas, the latter were available for classroom instruction and ground firing. With better equipment and longer courses air gunner training was becoming more complex and strenuous and perhaps too heavily weighted on the theoretical side. Partly for these reasons and partly because of a lowering in the quality of recruits wastage rose to seventeen and one half per cent from a mere five per cent in July 1942.[33]

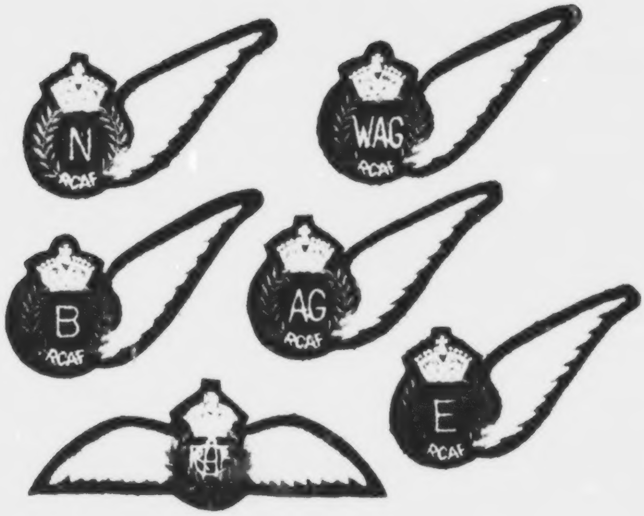
The seventh member of a heavy bomber crew was the flight engineer. Essentially, he was an aero-engine technician with addi-

An air gunnery exercise at No. 1 Bombing and Gunnery School at Jarvis, Ont., June 1941. The aircraft towing the target drogue and the gunnery trainer in the upper left are both Fairey Battles. As soon as the drogue was in place, trailing about 100 feet behind the mother aircraft, a trainee in the rear cockpit of the other machine opened fire, about 200 rounds of tracer ammunition being fired during each exercise. Understandably, flying a target towing machine was an unpopular assignment. Bristol Bolingbrokes and Westland Lysanders were also used for gunnery training and target towing. (PMR 81-212)

Wireless operator/air gunners practice sending and receiving in Morse code at No. 1 Wireless School, Montreal. Their air exercises were flown at No. 13 SFTS, St. Hubert using Noorduyn Norsemans, deHavilland Tiger Moths and Stinson 105's. (PMR 81-148)

tional training to qualify as a pilot's assistant. In the air his task was to keep track of fuel consumption and watch the multitude of dials and gauges for any sign of engine malfunctioning. In the event that the pilot was killed or badly injured the flight engineer, whose syllabus included a small amount of flying training, took over the controls. Nearly all flight engineer training for Bomber Command, including the squadrons of No. 6 Group RCAF, was conducted in the United Kingdom. But in July 1944 No. 1 Flight Engineers' School was opened at Aylmer, Ont. using four Halifax bombers obtained from the RAF. The output of this school totalled 1,913. Some of the graduates went overseas to replace RAF engineers in the RCAF squadrons and others served with multi-engine units of the Home War Establishment.[34]

Until 1943 the role of navigator, air bomber, wireless operator, and air gunner were but vaguely understood by the public or even by potential recruits some of whom were surprised to learn that aircrew types other than pilot were in demand. This distorted view had an adverse effect on recruiting and also on morale. In an



Aircrew badges awarded to Canadian graduates of the BCATP. Missing is the air observer badge which was not issued after October 1942 when the training of air observers was discontinued. (PL 605)

attempt to clarify the situation the recruiting centres began to put more emphasis on the crew, whether the crew of two in a Mosquito or of seven in a Lancaster, as a fighting team. Tour expired crews posted back to Canada also gave publicity to this concept. These efforts met with some success and more recruits, after some persuasion, were ready to opt for navigator or air bomber. But pilots still held the centre of attraction. When asked which aircrew category he preferred the reply of the average Canadian applicant was nearly always, "Pilot, sir."

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9

The "Manpower Crisis" of 1943 and Curtailment of Aircrew Training

In 1943 the BCATP reached its peak of production. As a result of measures put into effect during the previous year the output of aircrew rose from 1,574 in January to an all-time high of 5,157 in October.[1] By that time, although the war was far from over, it was evident that the Battle of Training had been won. But in regard to recruiting the year was one of ups and downs, of confusion and contradiction. In the first six months the RCAF was faced with an aircrew procurement crisis of serious proportions; in the second half of the year it had to deal with an embarrassingly large surplus of recruits.

Under the Agreement signed in 1942 Canada was committed to accepting half the cost of the plan and providing one half of the trainees. In addition, as host country it was expected to make up any manpower deficiencies resulting from delays in the arrival of aircrew pupils from the other parts of the Commonwealth. In round figures Canada was supposed to supply 34,600 recruits annually (out of a total intake of 68,419) or a monthly minimum of 2,900.[2] In terms of Canada's manpower potential this figure seems to have been unrealistically high and in only one month, April 1943, when 3,379 Canadians entered the aircrew training schools, was the RCAF able to meet the commitment.

In most months, however, even though aircrew procurement was in a steady and disturbing decline, dropping from 2,462 in January to 1,206 in July the air force came reasonably close to supplying its quota.[3] It was able to do so by drawing on its large reserve pool of candidates accumulated by means of over-recruiting in better days. In good recruiting months, as insurance against the lean times, the RCAF accepted more candidates than it had vacancies for and employed the surplus in various ways for periods up to three months or even longer. As they were fed into the training schools their place in the reserve pool was taken by new recruits who in turn had to endure the waiting period. In 1940, 1941, and 1942 the usual method of "storing" aircrew was assignment to tarmac duty, a catch-all commitment embracing any employment from guard duty to kitchen fatigue. Another method of holding recruits, used by the other services as well as by the air force, was to enlist them and place them on leave without pay with instructions to hold themselves in readiness for a call. A third method, the one most widely used in 1943 and 1944, was to enrol new recruits in an academic training programme which, in any case, many of them needed to upgrade their academic qualifications to air force standards.

At the beginning of April 1943 the back-log of untrained aircrew totalled 9,592, a comfortable margin which Air Marshal Breadner felt was adequate to ensure Canada's quota of aircrew trainees.[4] In May the number of new recruits, which Breadner expected would increase, fell off from 1,338 in the previous month to 1,181. The level of the reserve pool dropped to 5,907. This was still a fair number of recruits to have on hand but if the recruiting rate continued to decline at the current rate, as it threatened to do, the reserve would soon be whittled away. Taking a more pessimistic view, Breadner warned the Supervisory Board that "A continued low volume of enlistments and a reduction in the number of aircrew awaiting training are giving this service grave concern."[5] A slight improvement in enrolment in June did nothing to relieve his anxiety. The Board was told that the increase "is not indicative of the longer term trend which is downward."[6]

The RAF, which counted on Canada for twenty-five per cent of its aircrew,[7] kept a watchful eye on Canadian recruiting reports. In August, just prior to the "Quadrant" Conference in Quebec City where plans for the invasion of Europe were to be discussed, the Chief of Staff of the RAF, Air Chief Marshal Sir Charles Portal, discussed recruiting difficulties with Breadner who suggested Portal put his views in writing for the benefit of the Canadian government:

> I am sure I need not emphasize the importance of maintaining, at this critical stage of the war, the output of aircrews adequate to meet the growing

> output of aircraft and I should be much obliged if you would give the utmost consideration to the ways and means of maintaining the Canadian quota upon which for quality as well as quantity we so largely depend.[8]

Portal's concern is understandable. The bomber offensive was being pressed ever more heavily and casualties had mounted at an alarming rate in 1942 and the first few months of 1943. Ahead lay the invasion of Europe, and beyond that the British were expecting, even demanding, that their American ally accord them "a full and fair place in the war against Japan."[9]

The only bright spot on the recruiting horizon was a marked increase in recruits for the Women's Division of the RCAF. Formed in July 1941 it took the motto "They serve that men may fly," which was emphasized in the 1943 recruiting campaign. That it was effective may be judged from the fact that in 1943 the number of airwomen doubled to 14,562.[10] Though they served in many places and many capacities, they were to be found mainly at the various headquarters and at flying training and bombing and gunnery schools. Many were trained as instrument technicians, an occupation in which they excelled. They also worked alongside men as airframe and aero-engine mechanics and some of them claimed to delight in "the exciting and oily smell of aircraft."[11] As a result of their presence a large number of ground tradesmen, (over one thousand in August and September)[12] who otherwise could not have been spared were accepted for aircrew training.

An interesting development in the recruiting picture was the fact that in the spring of 1943 over sixty per cent of those enlisted were under twenty years of age as compared to twenty-five per cent in the previous year. In other words, the segment of the population from which potential aircrew applicants could be drawn was becoming narrowly restricted.[13] In 1943 the age limit for aircrew recruits, set at seventeen and a half in October 1941, was lowered to seventeen. Recruiting of this age group began in August[14] resulting in an immediate upswing in enlistments which became more noticeable in September as more young Canadians decided to join the air force instead of returning to school. Enlistments in August totalled 1,883, in September 2,909, in October 2,717 and in November 2,718, but in December dropped to 1,713[15] which would have been disappointing had it not been that the aircrew procurement crisis was over.

The seventeen year olds, who had to have their parents' consent to join up, were enrolled in the rank of "boy" and were not eligible to commence flying training until their eighteenth birthday. In the meantime they were placed in a special academic programme swelling the reserve of untrained aircrew.[16] In the third quarter of 1943 those aged seventeen and eighteen made up more than one half of Canadian aircrew recruits (1,206 in July, 1,883 in August, and 2,909 in September).[17]

On 6 August, about a week before Portal was pressing Breadner for assurances that the RAF could count on a continued supply of Canadian recruits, the British Prime Minister was questioning the existence of a large reserve of pilots in Fighter Command. "Your committee on Air Force establishments should certainly probe the enormous surpluses of crews ... in the fighter squadrons," he wrote to Deputy Prime Minister Clement Attlee: "3038 crews are maintained to man 1725 aircraft.... One wonders if everything is on a similarly lavish scale." The letter emphasized that Bomber Command "although in far more continuous action, work on a much smaller margin," and that Coastal Command, because of the necessity of having as many aircraft as possible out on long patrols was entitled to a "duplication of crews." But "This ... does not apply to fighter aircraft."[18] His letter was written just a few days after Portal had left England for the Quebec Conference (and a few days before Churchill left for the same destination). The Prime Minister had earlier questioned the Chief of the Air Staff about surplus pilots in Fighter Command[19] and had not been altogether satisfied with his answer.[20] Churchill's further probing now revealed that the Air Ministry had no clear idea of what the aircrew strength of the RAF really was.

This came to light in the fall. In November, in Ottawa, the Supervisory Board was discussing the need to extend the BCATP beyond 31 March 1945, the termination date set by the 1942 agreement, when it was told by the British High Commissioner who had just returned from the United Kingdom, that the War Cabinet was engaged in "a very close examination of the whole manpower situation." Facts and figures were not yet available but it was obvious, the High Commissioner reported, that a reduction of the BCATP was in order.[21] This was soon confirmed by the Air Ministry and in December steps were taken to disband four elementary training schools and five service flying training schools.[22]

This was a mere beginning. In February 1944 Harold Balfour, British Under Secretary of State for Air, and Air Marshal Sir Peter Drummond, the RAF Air Member for Training arrived in Canada to discuss further reductions with Power and Leckie. The latter, now an air marshal, had succeeded Breadner as Chief of the Air Staff at the beginning of the year, an appointment which reflected the military and political importance of the BCATP in the Canadian war effort and the important part which Leckie had played in its development.

The reserve of aircrew both in Canada and the United Kingdom demanded an immediate reduction in the BCATP but how far and how fast could it be cut back without an adverse effect on the Canadian economy, on the morale of aircrew trainees, on future air operations, and without creating the undesirable impression that Canadians could let up in their war effort? These were the imponderables facing Balfour and Power. Their answer was a compromise — a reduction of forty per cent to be achieved gradually over the space of a year.[23] On 16 February, the day on which his discussions with Balfour came to an end, Power explained to the House of Commons the need for cutting back:

> During the three years which followed the signing of the plan agreement in 1939, the principal preoccupation of Canada and the other partners was to create a training organization on which could be built fighting air forces equal to those of the enemy. To-day ... this objective has been reached, and we have increasing air superiority ... in every theatre of war .... there are thousands of aircrew being put through operational training units ... and further back again there are tens of thousands of young aircrew going through the schools of the British Commonwealth Air Training Plan.[24]

The forty per cent reduction was to be achieved by closing thirty-two and a half aircrew training schools out of total of eighty-two currently in operation. The redundant schools were to include three initial training schools, eight elementary flying training schools, eleven service training schools, three and one half air observer and air navigation schools, six bombing and gunnery schools, and one wireless school. These units, operating close to capacity were to be closed progressively, the initial training schools first followed at intervals by the others all of which were to be wound up by the end of the year.[25]

Soon after Balfour and Drummond returned to England they found that the surplus was larger than they had predicted, a result, no doubt, of a ruling that all reserve aircrew for the invasion of Europe were to be available by 1 April. In a personal letter to Leckie, Drummond wrote that every squadron was "bulging" with crews, operational training units and advanced training units were well stocked with reserves and reception centres for newly arrived aircrew were filled to overflowing:

> My great anxiety is that when the Second Front operations do start we shall not experience anything like the high wastage rates for which we have provisioned, so that the picture later in the year will be even worse than shown in this appreciation.[26]

Reflecting on another possibility, however, he felt that the surplus could be justified: "nobody knows what the Air Forces might not have to do should Overlord fail!"[27]

But "Overlord," the code name for the Normandy landing, did not fail. Moreover, because of unquestioned allied air supremacy, casualties, as Drummond had predicted, were much lighter than expected. On 27 June he again wrote to Leckie:

> I think that you will agree that we have gone as far as possible in extending courses and arranging special courses and that ... we can no longer hold the surplus but must transfer it to ... where it can be readily used, or even to ground duties in or outside the air forces ...[28]

In Canada air force recruiting was suspended on 17 June until further notice.[29] At this time 19,964 pupils, of whom 10,437 were Canadians, were undergoing training. In addition 5,739 Canadians who had commenced training were being held back for sickness or some other reason and were eventually expected to graduate. Another 206 were in operational training units and a back-log of 7,631 RCAF recruits were enrolled in pre-aircrew academic courses.[30]

Further reductions beyond the forty per cent hinged on Canadian and Commonwealth participation in the Pacific following the end of hostilities in Europe. Power and Balfour had made their calculations on the basis of a Canadian force of forty-seven fighter and bomber squadrons in the Far East[31] but the Canadian government became less and less disposed to such a large commitment and at the "Octagon" Conference held in Quebec in September 1944 the RCAF contribution was scaled down considerably.

Though its dimensions were not yet precisely defined, and would not be for another six months,[32] it was clear there would be more than enough aircrew to man it. There was no longer a reason for maintaining a large training establishment and in November the Canadian government announced that reduction of the BCATP would be speeded up and the plan terminated on 31 March 1945.[33]

Before censuring the British and Canadians for permitting the production of aircrew to get so far out of control it should be observed that a parallel situation developed in the USAAF. The similarities are striking. The Americans experienced an aircrew procurement crisis in the first part of 1943 which led to the recruiting of seventeen year old youths. In October it was discovered that there was a huge surplus of aircrew and in November curtailment plans were implemented.[34] In both instances a casualty rate lower than expected — in fighter, coastal, and transport operations generally and in bombing operations, where casualties were extremely heavy in 1942, 1943, and the first quarter of 1944, but much lighter thereafter — was the principal reason for the miscalculations. The need to plan ahead and have at least a year's supply of recruits on hand was another. Yet it must be admitted that the RAF and USAAF, both convinced that the war could be won by airpower and desperate to prove it, were inclined to overbuild their training organizations.

Despite the best intentions of the RCAF the period of deceleration of the BCATP proved to be a most trying time for all concerned. When the brakes were applied in November 13, 341 pupils were in various stages of training (about six thousand fewer than in June) while another 5,814, all Canadians, were ready to enter initial training school. At the other end of the pipeline 3,865 graduates were waiting at embarkation depots.[35] The ITS candidates were enrolled in the army, for enlistment where real manpower shortages were beginning to show up. Those already on course were allowed to continue but their morale was badly shaken by the sudden change in policy which among other things meant longer courses, higher standards, increased wastage, and fewer commissions.[36] Students who had completed elementary training faced a period of enforced inactivity because the service flying training schools still in operation were filled to capacity. If they did not relish the thought of waiting they could take their discharge.

remuster as air gunners, still in short supply, or transfer to the army — hard choices for ambitious young pilots. Trainees already in the service flying schools were somewhat better off as they were kept hard at work in a revitalized programme which had been extended from twenty to twenty-eight weeks. But on graduation the Canadians in this group, 1,066 out of a total of 2,339, faced the prospect of being placed in an air reserve from which they might or might not be called to active service.[17]

The widespread feeling of despondency created by this upheaval is well documented in excerpts from the censored correspondence of British trainees. Although promised that they would have the opportunity to complete their courses they bitterly resented the disruption in training, the prolonged stay they faced in Canada because of it and the "joe-jobs" they were assigned to in the interim. One, whose training was delayed five months typically complained "here we are ... doing odd jobs and have lost interest in everything." Another, apparently going through as an air bomber expressed himself in stronger language:

> Air bombers are now not wanted ... this new syllabus ... is made so hard and long that many people except the brilliant fail .... Everyone is discouraged .... The slightest misdemeanour, and out one goes .... one is told more or less, 'You are not wanted, you're in the way, remuster to A.G.'[18]

At the request of the British government, Canada agreed that RAF schools would be the first to be closed. British units considered essential were Canadianized and given RCAF designations while continuing to function as part of the BCATP. Thus No. 31 Operational Training Unit at Debert and No. 36 at Greenwood, NS, both engaged in training aircrews for intruder operations on Mosquito aircraft, were redesignated as No. 7 and No. 8 respectively and staffed with RCAF personnel. No. 32 OTU at Patricia Bay, BC, previously training crews for torpedo bombers, became No. 6 OTU and was reassigned to training personnel for transport operations — many of its graduates destined for South-East Asia. A heavy bomber unit, No. 5 OTU had been formed at Boundary Bay, BC in April 1944 for RAF purposes but under RCAF command. It was equipped with four-engined Consolidated Liberators, the largest aircraft used in the BCATP, and its graduates were also bound for South-East Asia.[19]

By the end of November 1944 all but two British schools* had been disbanded or Canadianized but about 3,800 RAF pupils, together with 800 Australians and 325 New Zealanders, were still undergoing training in December. In January 1945 the British government asked to have one hundred pilots and about the same number of navigators accepted every two weeks for training in Canadian schools.[40] This programme began immediately and continued under the BCATP until 31 March 1945 when a new Anglo-Canadian agreement came into effect which continued RAF flying training in Canada on a much reduced scale until the end of the war against Japan. This last agreement was entirely separate from the BCATP, however.[41]

In the last two years of the BCATP a growing number of trainees came from Canada's European Allies — Belgium, Czechoslovakia, France, Holland, Norway, and Poland. These countries maintained national squadrons within the general framework of the RAF and also provided individual aircrew for British squadrons. Until 1942 all except Norway used training facilities of the RAF in the United Kingdom but as more British schools were transferred to Canada allied nationals were given training space in the BCATP. As a result the "schools in Canada became miniature United Nations where, in addition to a myriad variety of the King's English, half a dozen foreign tongues could also be heard."[42]

Norway was the first of the European countries to train aircrew in Canada and the only one to set up its own training establishment here. After the occupation of their country in May 1940 a gallant remnant of the Norwegian air services** chose to carry on the fight from the United Kingdom. But British air space being at a premium the Norwegians approached the Canadian government for permission to rebuild their air strength in Canada using aircraft which had been ordered from the United States.* Negotiations moved quickly, helped along by the fact that the Norwegian government-in-exile had ready money to pay for what it was asking.[43] Its request to establish its own training centre in Canada was approved in principal in June 1940 (and officially in August) on the understanding that little help could be expected from the RCAF whose energies were fully absorbed in setting up the BCATP.[44]

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* No. 31 Air Navigation School at Port Albert, Ont. closed in February 1945; No. 1 Naval Air Gunner School at Yarmouth, NS, was disbanded on 30 March 1945.

** Before the war Norway had two separate air services, the Army Air Force and the Navy Air Force; in Canada these were reorganized and amalgamated as the Royal Norwegian Air Force; Norway, The Royal Norwegian Ministry of Defence, *Norway and its Defence Forces*, 1964, np.

With some assistance from the Toronto Flying Club the Norwegians began flying training in August. Meanwhile, Norwegian officials were negotiating with the Toronto Harbour Commission for the use of the Toronto Island Airport and here, and on a nearby piece of property at the foot of Bathurst Street, a training centre known as Little Norway was established. Although it comprised a technical school, a radio school a reception depot, and miscellaneous units, interest focussed on air activities and it is as a flying training centre that Little Norway is best remembered. The Norwegians at first planned to carry out a complete air training programme from the elementary to the advanced level but this proved to be too ambitious an undertaking. In 1941, after about thirty pupils had been fully trained, arrangements were made with the British Air Liaison Mission and the RCAF for Norwegians to use BCATP facilities for pilot training beyond the elementary stage as well as for all training of air observers and other aircrew categories. Consequently, to all intents and purposes Little Norway became an elementary flying training school following the same standards and syllabus as in the BCATP.**

As activities increased the Toronto site became over-crowded and in 1943 Little Norway was relocated at a seldom used airport near Gravenhurst, in the Muskoka region north of Toronto. Nearby, about four hundred acres of land, purchased with contributions from members the Royal Norwegian Air Force, was turned into a recreation centre for skiing in winter and fishing, camping, and swimming in summer. The majority of the trainees at Little Norway had escaped across the border into neutral Sweden and were then flown to the United Kingdom in British or American aircraft, some flown by Norwegian pilots. A few braved the North Sea in open boats risking everything for a chance to fight for the freedom of Norway. On reaching Canada all recruits were sent to the resort area to rest, relax, and recuperate. Then came a period of basic military training after which they were selected for training either as aircrew or ground personnel.[45]

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* The aircraft on order included Fairchild PT-19 monoplane trainers, Curtiss P P-40 Warhawk fighters, and Douglas 8A-5 fighters.

** Four hundred and twenty six pilots were trained to the elementary level at Little Norway and subsequently went on to wings standard at other schools.

Although foreign students selected for training in Canada were supposed to be proficient in English, many of them were not. That placed them under a severe handicap in learning to fly. If language training was needed, and usually it was, the recruits were sent to the RCAF School of English at No. 4 Manning Depot in Quebec City or to one of the schools of the War Emergency Training Plan which offered courses in English as well as in science and mathematics.* But their own authorities nevertheless urged that they must meet the same flying standards as other students and asked that no leniency be shown on account of the language problem. On occasion arrangements were made for foreign pilots to fly with students from their own country, assist them with ground subjects, and generally supervise their training. But authority remained with the Canadian instructors whose assessments were accepted without question.

During 1942 the intake of foreign pupils seldom exceeded fifty a month. These included a number of Free French who had followed General de Gaulle to England. After the invasion of North Africa in 1942 brought the French colonial empire over to the allied side a large number of French airmen were sent to Canada. They began arriving in April 1943 at the rate of about eighty a month, training as pilots, navigators, and air bombers.[46] Pilot candidates, some of whom had flying experience, were trained at schools in Alberta (No. 31 Elementary Flying School at DeWinton and No. 34 Service Flying Training School at Medicine Hat) and Saskatchewan (No. 6 EFTS at Prince Albert, No. 4 SFTS at Saskatoon, No. 13 at North Battleford,* and No. 32 at Moose Jaw). The French trainees were accompanied by a few of their own instructors and French-speaking pilots from Québec were also employed in their training. However, English was the language of instruction. French navigation trainees were scattered throughout the BCATP schools but most were sent to No. 9 Air Observer School at St. Jean, Qué. and No. 2 Air Navigation School at Charlottetown.** By 31 March, when the BCATP was officially terminated, close to 2,000 French aircrew had been trained in Canadian skies. Flying badges had also been awarded to about 900 Czechoslovakians, 677 Norwegians, 450 Poles, and approximately the same number of Belgians and Dutch.***

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* French-speaking Canadian recruits, if not bilingual, also had to face the ordeal of trying to master a second language while learning to fly an aeroplane. A language training course lasting eight weeks was available at No. 4 Manning Depot but it was helpful only for recruits who already had acquired some understanding of English. Francophones who joined the RCAF with little or no grasp of English found it extremely difficult to acquire sufficient understanding of the second language to enable them to absorb instruction in flying training.

On 29 March the flying training schools that were still active held their last wings parades with an added touch of pomp and ceremony. At most units aircrew of the European Allies were among those receiving their badges. No. 2 Service Flying Training School at Ottawa naturally attracted the greatest number of dignitaries but most schools including those in isolated areas, also presented an interesting international atmosphere. With flags of all the United Nations flying and about 5,000 people from the local area looking on, 132 pilots formed up in a hollow square to get their wings at No. 13 SFTS, North Battleford. The group included forty-two French, forty-one Australians, thirteen Belgians, nine Britons, eight Canadians, seven Netherlanders, two East Indians, and one Pole.[47] With such gatherings Canada could indeed be called "the Aerodrome of Democracy."

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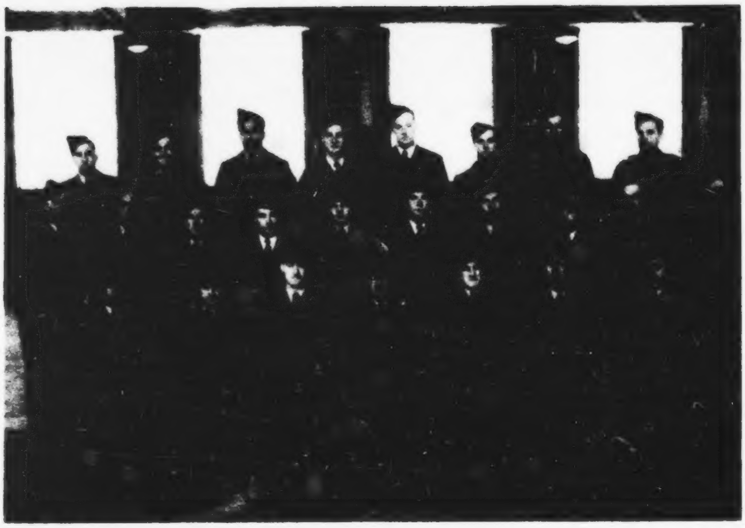
* Formerly No. 35 SFTS, a British school taken over by the RCAF on retrenchment of the BCATP.

** This unit was formed on 21 February 1944 following the disbandment of No. 31 General Reconnaissance School.

*** Except in the case of the Norwegians the figures given must be taken as approximations only. See Jackets to Wise, 3 May 1968, DHist 81/685 and F/O R.R. Wall, "The Training of Polish Airmen in Canada," nd, DHist 80/335.



Graduate pilots from Czechoslovakia, Fiji, France, Holland and Norway and instructional staff at No. 34 SFTS, 22 January, 1943. (PMR 81-151)

Belgian trainees at No. 34 SFTS raise a toast to their native land on Belgium's National Day of Independence, 21 July, 1944. (PMR 81-137)

Looking back it is difficult to grasp the BCATP in all its dimensions. In themselves the statistics are impressive: 131,553* aircrew trained for battle, through a ground structure embracing 105 flying training schools of various kinds, 184 support units and a staff numbering 104,000. When war was declared the RCAF had less than two hundred aircraft suitable for training, many of them obsolete. In December 1943 there were 11,000 aircraft on strength of the BCATP.**[48] To serve the Plan over a hundred new airfields had been built and many old ones vastly improved and expanded.[49]

Yet figures convey little idea of the tremendous problems encountered in transforming the multitude of volunteer citizens with varying backgrounds into highly-trained specialists, of doubling the output on short notice, and coping with scarcities of essential equipment. In essence the BCATP was an outstanding example of the problems, complexities, and possibilities of Commonwealth military co-operation and therein lies much of its historical interest. Formulated by the British Air Ministry on an imaginative scale, it was put into operation by the RCAF and carried through with a good deal of assistance from the RAF, the RAAF, and the RNZAF, and the goodwill of the United States. Looked at from another angle the BCATP may be thought of as part of that very wide field of what has been called North American Supply which was so vital to the conduct of the war.*** Although nearly half of the graduates came from other continents, it was in North America that they received their basic aircrew training and from here that they went overseas to take their place in eight or nine different allied air forces all closely associated with the RAF.

At the end of 1940 only 521 aircrew had passed through the training schools in Canada but by May 1942 the number had swelled to 21,284. "The House will ask me where these men are,"

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* This figure does not include 5,296 RAF and Fleet Air Arm personnel trained in RAF schools prior to 1 July 1942. "The British Commonwealth Air Training Plan December 17, 1939 — March 31, 1945," DHist 73/1558, X.

** Another 2228 aircraft had been disposed of in various ways.

*** See H. Duncan Hall, *North American Supply* (London: HMSO, 1955).

In 1980 Ian MacLeod of Edmonton paid a visit to the site of the former 19 SFTS at Vulcan, Alta. and found the names of the last graduation class still chalked on a blackboard in a hangar office. The class graduated on 29 March, 1945. (PMR 82-727) Ian MacLeod photo.

Air Minister Power said in the House of Commons and he went on to answer:

> Some have been ploughed back into the plan as instructors. Some ... were kept for the home war establishment. But the vast majority have gone overseas .... They are in every raid, in every sortie, they are in every attack on Germany. Wherever the British forces are attacking, there you will find graduates of our air training plan.[50]

Apart from its military significance the impact of the BCATP on Canadian civil and commercial aviation was immeasurable. When hostilities ended pre-war airfields used for training purposes, vastly expanded and improved, were returned to the municipalities that owned them. Other airfields, built especially for the BCATP were also absorbed into the country's air transport system. In so far as military requirements permitted these had been located in areas where they would be of value after the war either for military or commercial purposes. Some became part of the transcontinental airways, some became staging points on smaller branch lines, while still others found use as industrial airports and centres of local flying. Here and there some have been used for purposes other than flying, for schools and colleges, detention centres, industrial sites, and even stock car racing. A few have fallen almost completely into disuse, never to be visited by an aircraft save perhaps an occasional crop-dusting machine. The buildings have long been gone; the runways, now cracked and over-grown with weeds are all that remain as a memorial to what was once a busy and productive unit of the BCATP.

N.B. At the time of going to print the RCAF Assocaition was in process of designing memorial plaques to be placed at the sites of former BCATP schools currently in use as military or commercial airports.

References — Chapter 9

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18 PM to Deputy PM, 6 Aug. 1943, in Churchill, *Closing the Ring*, 661.

19 PM to CAS, 16 July 1943, *ibid*, 654.

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Epilogue

The financial arrangements of the BCATP involved so many claims and counter-claims between the various partners that Power quipped that it would take two or three generations of accountants to untangle the snarls.[1] Nevertheless, within six months of the termination of the plan a group of accountants working under the direction of H.G. Norman, the financial adviser of the BCATP, and F.C. Fayers of the United Kingdom, and making frequent use of the element of estimate, produced a balance sheet that satisfied all parties.

The cost of the BCATP as calculated by the financial experts was $2,231,129,039.26 broken down as shown in Table A-3. It may be noted that Canada's contribution amounted to $1,617,955,108.79 or approximately seventy-two per cent of the air training cost. The United Kingdom paid $54,206,318.22 in cash and in addition provided equipment to the value of $162,260,787.89 for a total contribution of $216,467,106.11 or about ten per cent of the overall cost. Payments by Australia, $65,181,068, covered three per cent of the cost and by New Zealand, $48,025,393 about two per cent. Materiel provided through Lend-Lease was evaluated at $283,500,362, roughly thirteen per cent of the total.

To arrive at a final cost-sharing settlement between the United Kingdom and Canada the accountants dealt with the BCATP in two parts, Plan No. 1 which came to an end on 30 June 1942, and Plan No. 2. When Plan No. 1 came to an end Canada held a claim of $212,280,010 against the United Kingdom for money spent on British transferred schools and in purchasing additional equipment, mainly aircraft, to make up for a shortfall in the arrival of shipments from the United Kingdom. After some miscellaneous British counter-claims against Canada were deducted the amount owing was reduced to $202,634,867 and to round off the figure the Canadian government waived $2,634,867 leaving a balance of

TABLE A-3

Summary of BCATP cost and contributions[2]

Money contributed by Canada		$1,589,954,609.94
Money contributed by the United Kingdom		54,206,318.22
Money contributed by Australia		65,181,068.23
Money contributed by New Zealand		48,025,393.47
		$1,757,367,389.86
Equipment furnished by the United Kingdom:		
Plan 1 (17 December, 1939 — 30 June, 1942)	$87,365,032.22	
Plan 2 (1 July, 1942 — 31 March, 1945)	74,895,755.67	
	$162,260,787.89	$162,260,787.89
Materiel provided through Lend-Lease:		
Plan 1	$3,000,000.00	
Plan 2	$280,500,362.66	
	$283,500,362.66	$283,500,362.66
Mutual aid by Canada:		
to Australia	$27,585,611.77	
to New Zealand	414,887.08	
	$28,000,498.85	$28,000,498.85
		$2,231,129,039.26

$200,000,000 as the amount to be recovered from Great Britain for Plan No. 1.[3]

According to the agreement of June 1942 the cost of Plan No. 2, $1,434,226,236, was to be divided equally between Canada and the United Kingdom. When the books were balanced they showed that the United Kingdom had contributed $434,602,078.88 including material obtained on Lend-Lease and payments made by Australia and New Zealand which were counted as part of Britain's share, and still owed Canada $282,511,039.25. Sundry British counter-claims reduced this amount to $225,682,811 and Canada agreed to cancel the last six figures leaving a liability of \$225,000,000.[4] Thus, between Plans No. 1 and No. 2, \$425,000,000 was owing when the accounts were balanced in September 1945.

When the Second Session of the first post-war Parliament met on 14 March 1946 the Speech from the Throne included a reference to a loan to be made to the United Kingdom to help maintain the British market for Canadian food products and other exports.[5] Subsequently, on 29 March, the Minister of Finance introduced Bill No. 28 providing for a loan of \$1,250,000,000. Included in the Bill was a clause cancelling the \$425,000,000 still owing to Canada. On 7 May Bill No. 208 was passed on a division of 167 to 6 and the books were closed on the BCATP.[6]

There was a second more spectacular anticlimax before the curtain was finally rung down. On 30 September 1949, representatives from all the countries that had participated in the BCATP gathered at RCAF Station Trenton the post-war centre of military flying training in Canada. The highlight of the occasion was the presentation to Canada by the United Kingdom, Australia, and

New Zealand of a set of wrought-iron gates. Intended as a permanent memorial and a symbol of Commonwealth friendship and unity, and bearing the coats of arms of the four partners in the BCATP surmounted by the badge of the RCAF, the Memorial Gates looked down on the parade square where members of the first class of observers received their wings on 24 October 1940. In accepting the gates for Canada Prime Minister Louis St Laurent remarked:

> We are today dedicating an enduring monument to the vision of those who conceived the air training plan, to the energy of those who organized it and to the trained airmen from its schools who fought and won victory in the air.[7]

At the conclusion of the programme the visitors passed through the Memorial Gates and read on the flanking limestone walls an epitaph to the thousands of BCATP graduates who lost their lives in the war:

> Their shoulders held the sky suspended;
> They stood, and earth's foundations stay.[8]

References — Epilogue

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8 Alfred Edward Housman, "Epitaph on an Army of Mercenaries."

STATISTICAL ANALYSIS OF AIRCREW GRADUATES

GRADUATES OF THE BCATP AT SIX-MONTH INTERVALS

	Pilot	Observer* (Nav B)	Nav W	Nav	Air Bomb	WO/AG	AG	Naval AG	Flt Eng	Monthly Total	Cumulative Total
1940											
October											
RCAF		38									
RAF											
RAAF											
RNZAF											
		38								38	38
1941											
March											
RCAF	374	125				162	40				
RAF	14	23					2				
RAAF	32	—					—				
RNZAF	—	—				—	—				
	420	148				162	42			772	2,439
August											
RCAF	570	95				253	7				
RAF	25	44				7	1				
RAAF	47	37				78	—				
RNZAF	83	29				87	—				
	725	205				425	8			1,363	8,043

STATISTICAL ANALYSIS OF AIRCREW GRADUATES

GRADUATES OF THE BCATP AT SIX-MONTH INTERVALS

	Pilot	Observer* (Nav B)	Nav W	Nav	Air Bomb	WO/AG	AG	Naval AG	Flt Eng	Monthly Total	Cumulative Total
1942											
January											
RCAF	370	172				309	63				
RAF		46				17	1				
RAAF	2	46				11	2				
RNZAF	40	41				11	2				
	412	305				348	68			1,133	15,836
June											
RCAF	556	99				318	124				
RAF	86	16				7	19				
RAAF	2	4				49	2				
RNZAF	65	3				35	7				
	709	122				409	152			1,392	23,802
November											
RCAF	568	15		161	213	313	107				
RAF	619	4	74	229	242	1	67				
RAAF	7	19		1	7	1					
RNZAF	44	5		22	12	38	3				
	1,238	43	74	413	474	353	177			2,772	38,159
1943											
May											
RCAF	483	18		129	183	306	266				
RAF	605	29	99	32	160	30	5				
RAAF	69	2		20	23	74	1				
RNZAF	103			27	3	58	5				
	1,260	49	99	208	369	468	277			2,730	56,507

STATISTICAL ANALYSIS OF AIRCREW GRADUATES

GRADUATES OF THE BCATP AT SIX-MONTH INTERVALS

	Pilot	Observer* (Nav B)	Nav W	Nav	Air Bomb	WO/AG	AG	Naval AG	Flt Eng	Monthly Total	Cumulative Total
October											
RCAF	800	89	—	392	353	225	713	—			
RAF	1,028	96	142	261	378	6	40	25			
RAAF	155	3	—	67	50	85	17	—			
RNZAF	63	2	—	66	59	24	18	—			
	2,046	190	142	786	840	340	788	25		5,157	74,598
1944											
March											
RCAF	649	54	—	251	184	235	519	—			
RAF	636	93	194	244	297	10	42	42			
RAAF	34	3	—	27	41	107	6	—			
RNZAF	73	3	—	—	26	21	13	—			
	1,392	153	194	522	548	373	580	42		3,804	92,644
August											
RCAF	538	75	37	195	191	246	368	—			
RAF	593	61	150	226	239	46	43	39			
RAAF	93	1	—	27	36	59	7	—			
RNZAF	9	4	—	17	16	18	7	—			
	1,233	141	187	465	482	369	425	39		3,341	108,958
1945											
January											
RCAF	142	50	39	117	—	250	378	—	346		
RAF	162	68	58	131	—	14	12	33	—		
RAAF	41	1	—	3	—	45	12	—	—		
RNZAF	32	6	4	1	—	34	18	—	—		
	377	125	101	252		343	420	33	346	1,997	124,120

- Training of air observers came to an end in October 1942; training of navigators began in November 1942.

APPENDIX B

SUMMARY OF AIRCREW GRADUATES

October 1940 to March 1945*

	Pilot	Nav B	Nav W	Nav	Air Bomb	WO/AG	AG	Naval AG	Flt Eng	Total
RCAF	25,747	5,154	421	7,280	6,659	12,744	12,917		1,913	72,835
RAF	17,796	3,113	3,847	6,922	7,581	755	1,392	704		42,110
RAAF	4,045	699		944	799	2,875	244			9,606
RNZAF	2,220	829	30	724	634	2,122	443			7,002
Total	49,808	9,795	4,298	15,870	15,673	18,496	14,996	704	1,913	131,553

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* Figures do not include 5,296 RAF and Fleet Air Arm personnel trained prior to 1 July 1942 including 5,215 trained at RAF transferred schools and 81 at RCAF schools as follows: 4,139 pilots, 1,006 observers, and 151 navigators W.

APPENDIX C

FLYING TRAINING ESTABLISHMENTS

Specialist Schools — 3

Name	Location	Opened	Closed
Central Flying School	Trenton, Ont	1 February 1940*	**
Central Navigation School	Rivers, Man	11 May 1942	15 September 1945
Instrument Flying School	Deseronto, Ont	2 April 1943	**

Flying Instructor's Schools — 3

Number	Location	Opened	Closed
1	Trenton, Ont	3 August 1942	31 January 1945
2	Vulcan, Alta	3 August 1942	
	moved to Pearce, Alta	3 May 1943	20 January 1945
3	Arnprior, Ont	3 August 1942	28 January 1944

Service Flying Training Schools — 29

Number	Location	Opened	Closed
1	Borden, Ont	1 November 1939*	31 March 1946
2	Ottawa, Ont	5 August 1940	14 April 1945
3	Calgary, Alta	28 October 1940	28 September 1945
4	Saskatoon, Sask	16 September 1940	30 March 1945
5	Brantford, Ont	11 November 1940	3 November 1944
6	Dunnville, Ont	25 November 1940	1 December 1944
7	Fort Macleod, Alta	9 December 1940	17 November 1944
8	Moncton, NB	23 December 1940	
	moved to Weyburn, Sask	24 January 1944	30 June 1944
9	Summerside, PEI	6 January 1941	
	moved to Centralia, Ont	8 July 1942	30 March 1945
10	Dauphin, Man	5 March 1941	14 April 1945
11	Yorkton, Sask	10 April 1941	1 December 1944
12	Brandon	16 May 1941	30 March 1945
13	St Hubert, Que	1 September 1941	
	moved to N. Battleford, Sask	25 February 1944	30 March 1945
14	Aylmer, Ont	3 July 1941	
	moved to Kingston, Ont	15 August 1944	7 September 1945
15	Claresholm, Alta	9 June 1941	30 March 1945
16	Hagersville, Ont	8 August 1941	30 March 1945
17	Souris, Man	8 March 1943	30 March 1945
18	Gimli, Man	6 September 1943	30 March 1945
19	Vulcan, Alta	3 May 1943	14 April 1945
31	Kingston, Ont	7 October 1940	14 August 1944
32	Moose Jaw, Sask	9 December 1940	17 October 1944

* Absorbed from Home War Establishment

** Absorbed by the RCAF on termination of the BCATP

Number	Location	Opened	Closed
33	Carberry, Man.	26 December 1940	17 November 1944
34	Medicine Hat, Alta.	8 April 1941	17 November 1944
35	N. Battleford, Sask.	4 September 1941	25 February 1944
36	Penhold, Alta.	28 September 1941	3 November 1944
37	Calgary, Alta.	22 October 1941	10 March 1944
38	Estevan, Sask.	27 April 1942	11 February 1944
39	Swift Current, Sask.	15 December 1941	24 March 1944
41	Weyburn, Sask.	5 January 1942	22 January 1944

General Reconnaissance Schools — 2

Number	Location	Opened	Closed
1	Summerside, PEI	6 July 1942	3 February 1945
31	Charlottetown, PEI	20 January 1941	21 February 1944

Operational Training Units — 7

Number	Location	Opened	Closed
1	Bagotville, Qué.	20 July 1942	31 January 1945
3	Patricia Bay, BC	9 November 1942	3 August 1945
5	Boundary Bay, BC	1 April 1944	
	and Abbotsford, BC	15 August 1944	31 October 1945
31	Debert, NS	3 June 1941	
	Redesignated No. 7 OTU	1 July 1944	20 July 1945
32	Patricia Bay, BC	13 October 1941	
	moved to Comox, BC		
	1 June 1944 and		
	redesignated No. 6 OTU		
	moved to Greenwood, NS	15 January 1946	**
34	Pennfield Ridge, NB	1 June 1942	19 May 1944
36	Greenwood, NS	11 May 1942	
	redesignated No. 8 OTU	1 July 1944	continued as RCAF Station Greenwood

Wireless Schools — 4

Number	Location	Opened	Closed
1	Montreal, Que.	16 February 1940*	
	moved to Mount Hope, Ont.	14 September 1944	31 October 1945
2	Calgary, Alta.	16 September 1940	14 April 1945
3	Winnipeg, Man.	17 February 1941	20 January 1945
4	Guelph, Ont.	7 July 1941	12 January 1945

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* Absorbed from Home War Establishment

** Absorbed by the RCAF on termination of the BCATP.

Bombing and Gunnery Schools — 11

Number	Location	Opened	Closed
1	Jarvis, Ont.	19 August 1940	17 February 1945
2	Mossbank, Sask.	28 October 1940	15 December 1944
3	MacDonald, Man.	10 March 1941	17 February 1945
4	Fingal, Ont.	25 November 1940	17 February 1945
5	Dafoe, Sask.	26 May 1941	17 February 1945
6	Mountain View, Ont.	23 June 1941	**
7	Paulson, Man.	23 June 1941	2 February 1945
8	Lethbridge, Alta.	13 October 1941	15 December 1944
9	Mont Joli, Que.	15 December 1941	14 April 1945
10	Mount Pleasant, PEI	20 September 1943	6 June 1945
31	Picton, Ont.	28 April 1941	17 November 1944

Naval Air Gunners' School — 1

Number	Location	Opened	Closed
1	Yarmouth, NS	1 January 1943	30 March 1945

Flight Engineers' School — 1

Number	Location	Opened	Closed
1	Aylmer, Ont.	1 July 1944	31 March 1945

Air Navigation Schools — 6

Number	Location	Opened	Closed
1	Trenton, Ont. moved to	1 February 1940*	
	Rivers, Man. redesignated Central	23 November 1940	
	Navigation School	11 May 1942	15 September 1945
2	Pennfield Ridge, NB	21 July 1941	30 April 1942
31	Port Albert, Ont.	18 November 1940	17 February 1945
32	Charlottetown, PEI	18 August 1941	11 September 1942
33	Hamilton, Ont.	9 June 1941	6 October 1944
2	Charlottetown, PEI	21 February 1944	7 July 1945

CIVILIAN OPERATED SCHOOLS

Air Observer Schools — 10

Number	Location	Sponsored By	Opened	Closed
1	Malton, Ont.	Dominion Skyways CP Airlines	27 May 1940	30 April 1945
2	Edmonton, Alta.	Canadian Airways CP Airlines	5 August 1940	14 July 1944
3	Regina, Sask. moved to	Prairie Airways CP Airlines	16 September 1940	
	Pearce, Alta.	12 September 1942	6 June 1943	

* Absorbed from Home War Establishment

** Absorbed by the RCAF on termination of the BCATP.

Air Observer Schools — 10 (Cont'd)

Number	Location	Sponsored By	Opened	Closed
4	London, Ont.	Leavens Brothers	25 November 1940	31 December 1944
5	Winnipeg, Man.	CP Airlines	6 January 1941	30 April 1945
6	Prince Albert, Sask.	Mason and Campbell Aviation Company Ltd.	17 March 1941	11 September 1942
7	Portage la Prairie, Sask.	CP Airlines	28 April 1941	31 March 1945
8	Ancienne Lorette, Que.	CP Airlines	29 September 1941	30 April 1945
9	St. Jean, Que.	CP Airlines	7 July 1941	30 April 1945
10	Chatham, NB	Local citizens	21 July 1941	30 April 1945

Elementary Flying Training Schools — 30

Number	Location	Sponsored By	Opened	Closed
1	Malton, Ont.	Toronto Flying Club	24 June 1940	3 July 1942
2	Thunder Bay, Ont.	Thunder Bay Flying Club	24 June 1940	31 May 1944
3	London, Ont.	London Flying Club	24 June 1940	3 July 1942
4	Windsor Mills, Qué.	Montreal Flying Club	24 June 1940	25 August 1944
5	Lethbridge, Alta. moved to	Calgary Flying Club	22 July 1940	
	High River, Alta.		28 June 1941	15 December 1944
6	Prince Albert, Sask.	Prince Albert Flying Club and Saskatoon Flying Club	22 July 1940	15 November 1944
7	Windsor, Ont.	Windsor Flying Club	22 July 1940	15 December 1944
8	Vancouver, BC moved to	Aero Club of BC	22 July 1940	
	Boundary Bay, BC		20 December 1941	2 January 1942
9	St. Catharines, Ont.	St. Catharines Flying Club	14 October 1940	14 January 1944
10	Mount Hope, Ont. moved to	Hamilton Aero Club	14 October 1940	
	Pendleton, Ont.		31 August 1942	15 September 1944
11	Cap de la Madeleine, Qué.	Quebec Airways CP Airlines	14 October 1940	11 February 1944
12	Goderich, Ont.	Kitchener-Waterloo Flying Club and County of Huron Flying Club	14 October 1940	14 July 1944
13	St. Eugene, Ont.	Ottawa Flying Club	28 October 1940	19 June 1945
14	Portage la Prairie, Man.	Winnipeg Flying Club	28 October 1940	3 July 1942
15	Regina, Sask.	Regina Flying Club	11 November 1940	11 August 1944
16	Edmonton, Alta.	Edmonton Flying Club	11 November 1940	17 July 1942
17	Stanley, NS	Halifax Flying Club	17 March 1941	14 January 1944
18	Boundary Bay, BC	Aero Club of BC	10 April 1941	25 May 1942
19	Virden, Man.	Brandon-Virden Flying Club and Moose Jaw Flying Club	16 May 1941	15 December 1944

Elementary Flying Training Schools — 30 (Cont'd)

Number	Location	Sponsored By	Opened	Closed
20	Oshawa, Ont.	Oshawa Flying Club, Kingston Flying Club, Brant-Norfolk Flying Club	21 June 1941	15 December 1944
21	Chatham, NB	Moncton Flying Club	3 July 1941	14 August 1942
22	Ancienne Lorette, Que.	Quebec City Flying Club	29 September 1941	3 July 1942
23	Davidson, Sask.	Operated by RCAF	9 November 1942	
	moved to Yorkton, Sask.		29 January 1945	15 September 1945
24	Abbotsford, BC	Aero Club of BC	6 September 1943	15 August 1944
31	DeWinton Alta	Opened by RAF, taken over by Toronto Flying Club	18 June 1941 13 July 1942	25 September 1944
32	Bowden, Alta.	Opened by RAF, taken over by Edmonton Flying Club	12 July 1941 20 July 1942	8 September 1944
33	Caron, Sask.	Opened by RAF, taken over by Aero Club of BC	5 January 1942 25 May 1942	14 January 1944
34	Assiniboia, Sask.	Opened by RAF, taken over by Winnipeg Flying Club	11 February 1942 6 July 1942	
		redesignated No. 25 EFTS	30 January 1944	28 July 1944
35	Neepawa, Man.	Opened by RAF, taken over by Moncton Flying Club	30 March 1942 24 August 1942	
		redesignated No. 26 EFTS	30 January 1944	25 August 1944
36	Pearce, Alta.	Operated by RAF	30 March 1942	14 August 1942

APPENDIX D

PRINCIPAL GROUND ESTABLISHMENTS AND SUPPORT UNITS OF THE BCATP

Training Command Headquarters

No. 1	Toronto
No. 2	Winnipeg
No. 3	Montreal
No. 4	Regina (April 1940 to October 1941) Calgary (October 1941 to November 1944)

Manning Depots

No. 1	Toronto
No. 2	Brandon (29 April 1940 to May 1944) Swift Current, Sask. (May 1944 to August 1944)
No. 3	Edmonton

No. 4	Québec
No. 5	Lachine
No. 6	Toronto (Women's Division)
No. 7	Rockcliffe (Women's Division)

Initial Training Schools

No. 1	Toronto
No. 2	Regina
No. 3	Victoriaville, Qué.
No. 4	Edmonton
No. 5	Belleville, Ont.
No. 6	Toronto
No. 7	Saskatoon

Radio Direction Finding (Radar) Schools

No. 1	Leaside, Ont.
No. 31	Clinton, Ont. (became No. 5 in July 1943)

Equipment Depots

No. 1	Toronto
No. 7	Winnipeg
No. 11	Calgary
No. 12	Montreal
No. 17	Ottawa

Repair Depots

No. 6	Trenton, Ont.
No. 8	Winnipeg
No. 9	St Jean, Qué.
No. 10	Calgary
No. 18	Ottawa

Embarkation Depots

No. 1	Halifax
No. 2	Moncton, NB
No. 31	RAF Personnel Depot, Moncton

Miscellaneous Schools

Air Armament School	Mountain View, Ont.
AID Inspector School	Malton, Ont.
1 Composite Training School	Trenton
2 Composite Training School	Toronto, Ont.
School of Aero Engineering	Montreal
School of Aviation Medicine	Toronto
School of Cookery	Guelph, Ont.

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